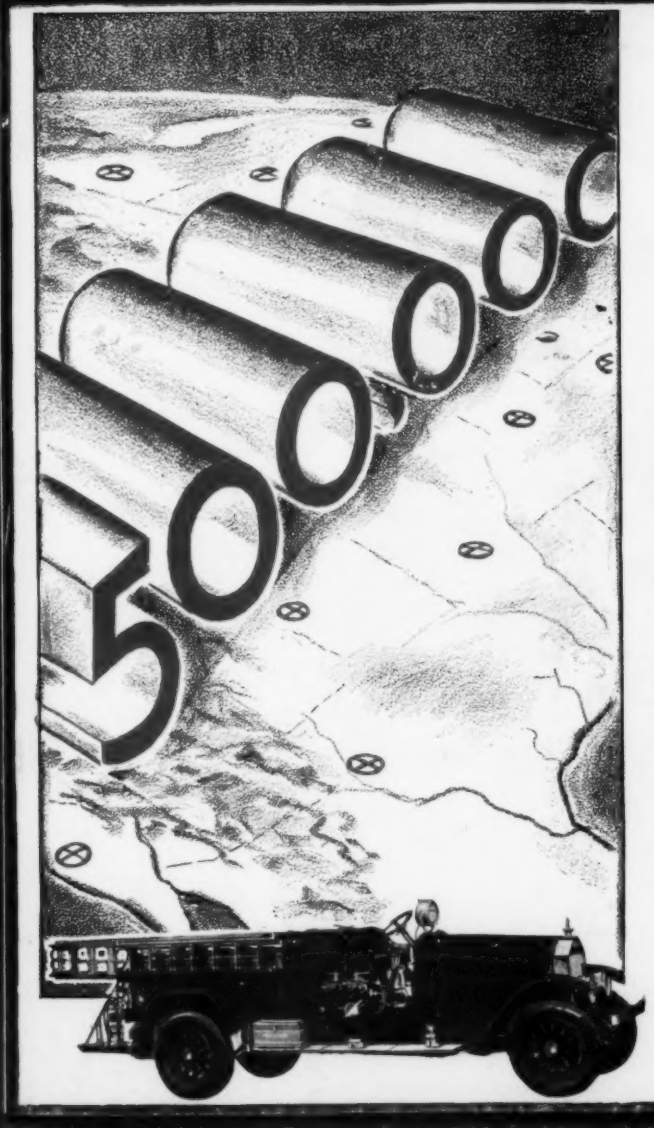
FIRE ENGINEERING

A Consolidation of
FIRE AND WATER ENGINEERING *and* THE FIRE ENGINEER

APRIL 18, 1928



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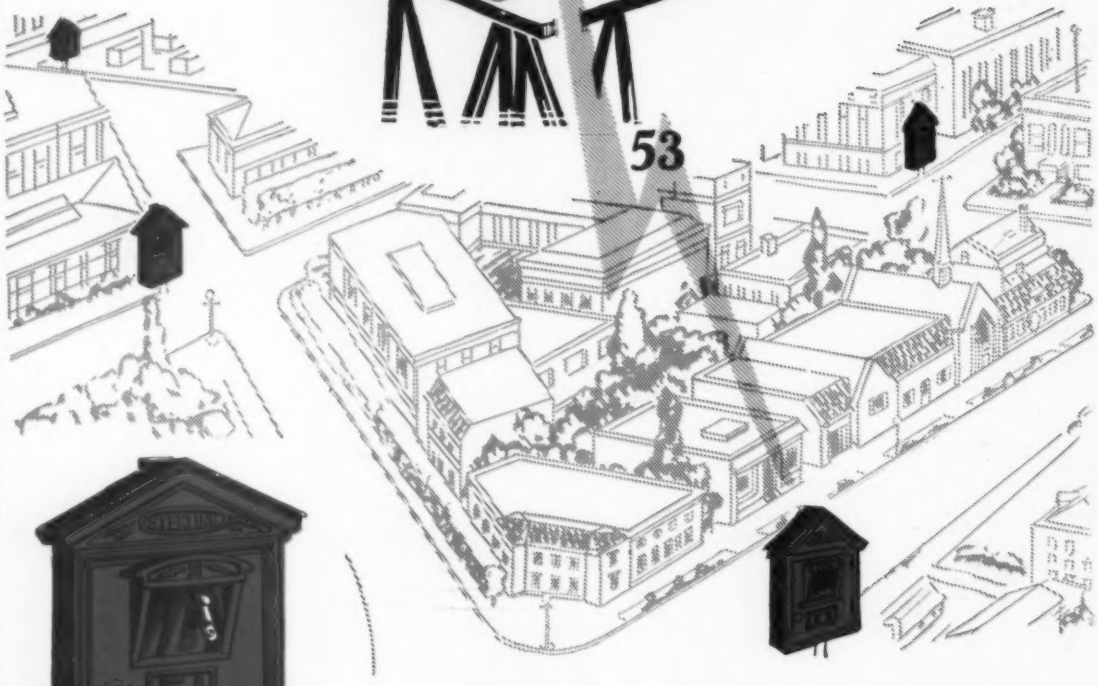

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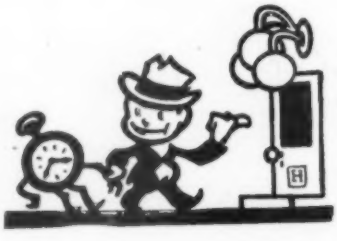

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The Publishers

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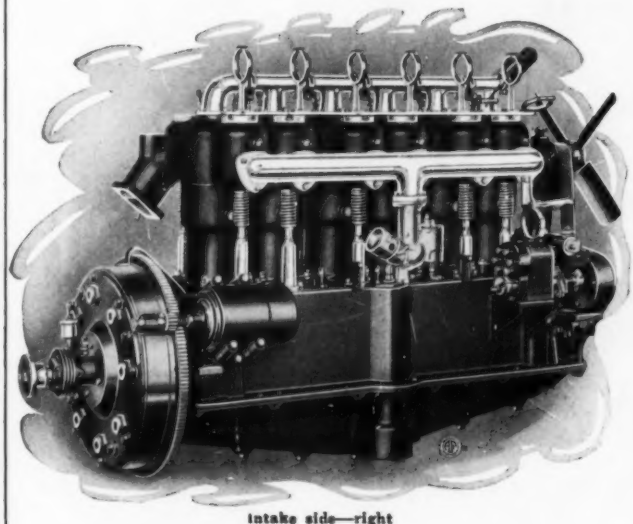

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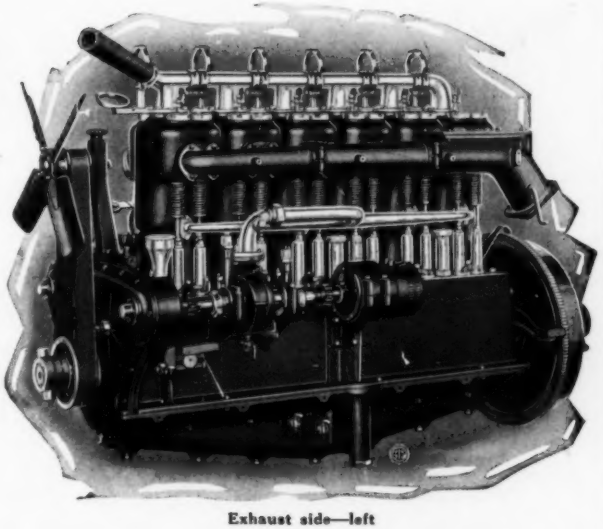

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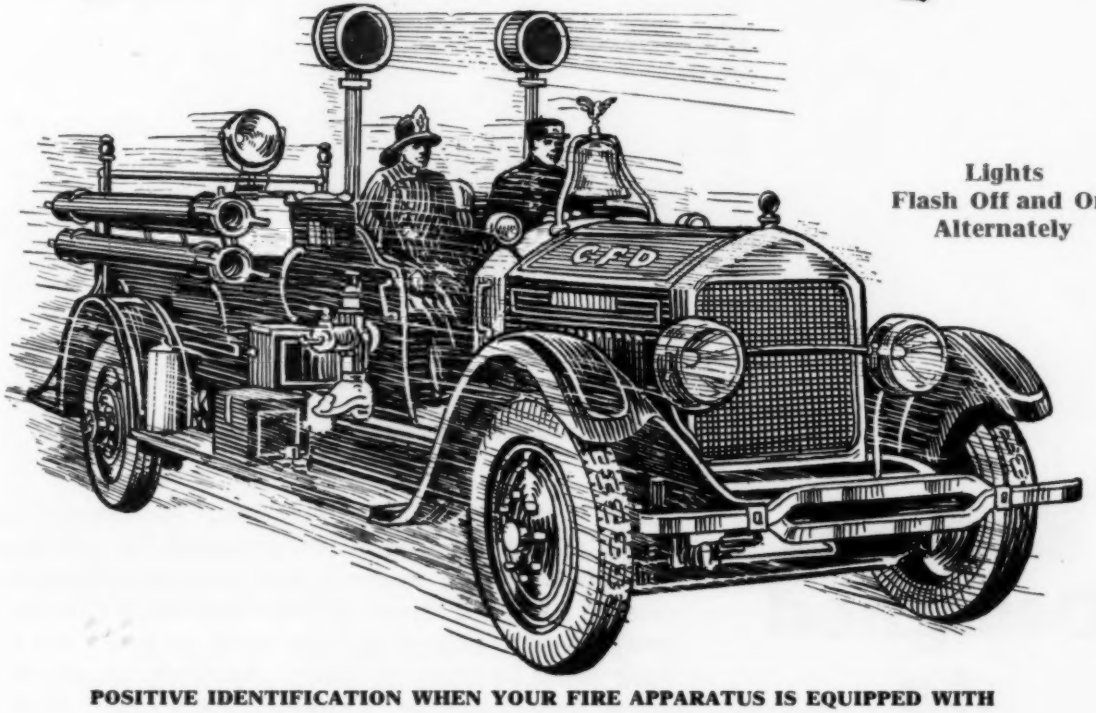

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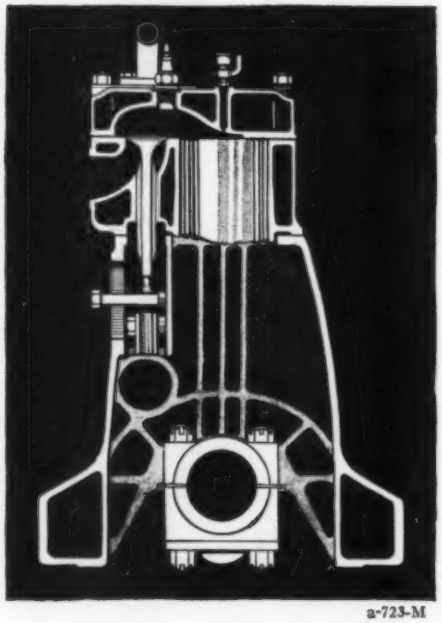

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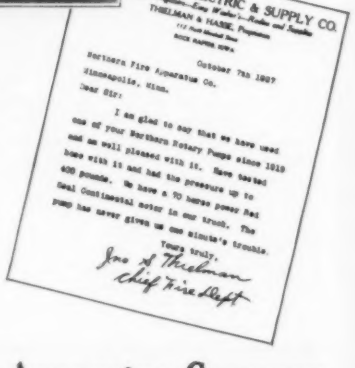
Thirty years later, the Great Fire of London destroyed 500 acres of buildings—due, we are told, to the too enthusiastic zeal of the first fireman to reach the scene. One squeeze broke his bagpipe. By the time help arrived the fire was beyond control.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FIRE ENGINEERING

(A Consolidation of Fire and Water Engineering and The Fire Engineer)

The Journal of the Fire Protection Profession

VOLUME LXXXI APRIL 18, 1928 NUMBER 8

Getting a Line to the Thirtieth Floor

Suggestion by Assistant Chief Dougherty, of the New York Fire Department, Assuming Both Elevators and Standpipe Are Out of Commission

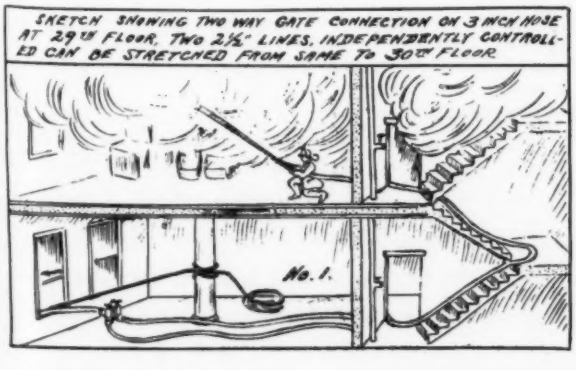
By WILLIAM JEROME DALY

SINCE a fire in the wooden scaffolding around the pyramidical tower of the Sherry-Netherlands Hotel forty-two stories high in New York City last April—a fire which burned itself out for several hours because of a defective standpipe line which had not been maintained in workable condition while the building was being constructed—the problem of reaching such dizzy heights with effective streams from hose lines, has been the talk of New York and other fire departments.

Assistant Chief Thomas F. Dougherty, New York

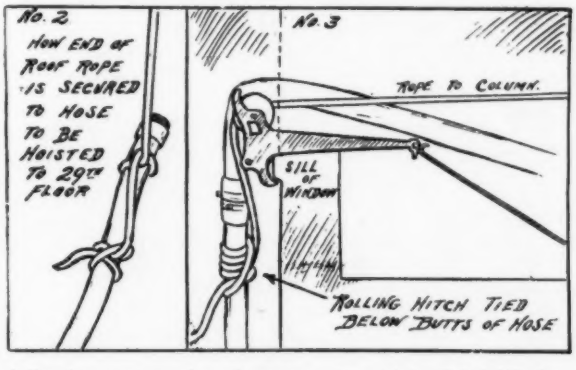
The problem formed the basis of a question asked in a recent civil service examination for promotion to the rank of captain in the New York Department, and since then the subject has been intensified to the point of provoking numerous and various plans or formulae for attacking such a blaze.

FIRE ENGINEERING has published the respective suggestions of Deputy Chief James W. Heffernan and Deputy Chief Henry B. Helm, both of the New York Department and assigned to the high hazard districts of lower Manhattan. In subsequent issues other solutions which have been received will be published.


SKETCH SHOWING TWO WAY GATE CONNECTION ON 3 INCH HOSE AT 29TH FLOOR. TWO 2½" LINES, INDEPENDENTLY CONTROLLED CAN BE STRETCHED FROM SAME TO 30TH FLOOR
No. 1.

Chief Dougherty's Suggestion

Now comes the suggestion of Assistant Chief of Department Thomas F. Dougherty, dean of the faculty in the New York Fire Department College. His plan has the endorsement of Fire Chief John Kenlon, with the following reservation, however, in which Chief Kenlon says:


No. 2
How end of Roof Rope is secured to hose to be hoisted to 29th floor
No. 3
Rope to Column.
Sill of window
Rolling Hitch Tied Below Butts of Hose

"It is very encouraging to see so many of the officers taking such a deep interest in their duty as to work out these various fire fighting problems. I take a selfish pride in the fact that they do think of their work as evidenced by so many suggestions made to conquer a fire at such heights.

"While the various solutions presented by several officers have many points of excellence, I am of the opinion however that the solution suggested by Assistant Chief Dougherty is the best thus far. At all events these various suggestions are only make-shifts and should not be regarded by the fire fighting profession as a pre-disposition to countenance or condone violations of the law with respect to the standpipe regulations for buildings in course of construction.

"Standpipes in buildings under construction should conform to law at all times and be maintained in a dependable condition, but since accidents and emergencies are always confronting firemen, I think Chief Dougherty's scheme is so far the best to meet such an emergency."

Those acquainted with the chief have been waiting patiently for the plan to be released. Chief Dougherty's ideas were executed in the sketch by Capt. Fred. Lehman of H. & L. Co. 26 in Harlem.

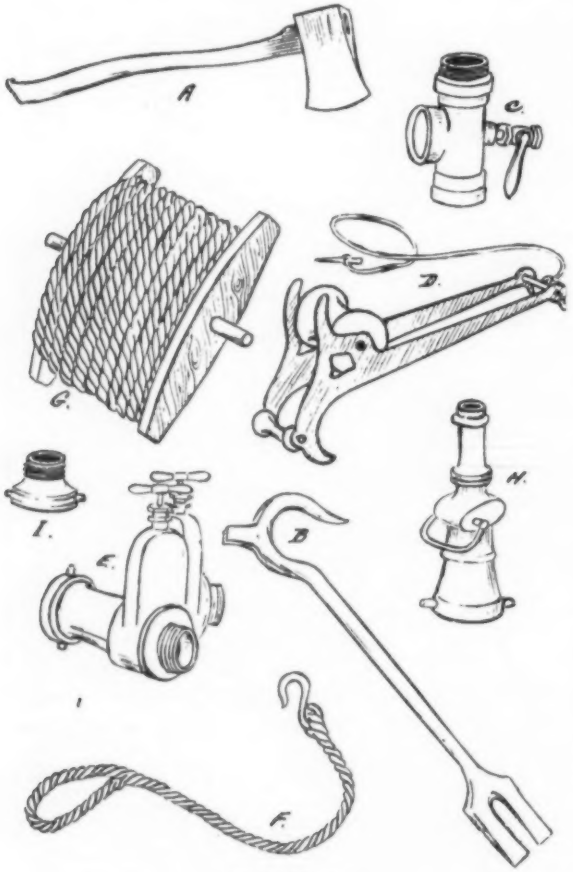
The Plan of Operation

Chief Dougherty says he would handle such a situation like this:

Order the first and the second companies to the 29th floor, assuming the fire is on the thirtieth floor, and, governed by conditions, detach one man at each set-back on their way up.

The tools to be carried up are as follows:

Four roof ropes, G, one axe, A, one claw-tool, B, two controlling nozzles 1⅛ in., H, two hose rollers, D, and



Tools Used

A—Axe, 2; B—Claw Tool, 2; C—Gauge, H.P., 1; D—Hose Roller, 3; E—Gate Connection, 2-Way, 1; F—Ladder Strap, 1; G—Roof Rope, 7; H—Nozzle (Controlling), 2; I—Reducer, 3 x 2½", 1. Hose—Lengths of 3", 11; Lengths of 2½", 4.

one two-way gate, E, with reducer, I. The axe and claw-tool to be used for forcing doors.

Place hose roller in position and secure it on the window of 29th floor (sketch No. 3).

The man at lowest set-back to do likewise at cornice of same with second hose roller.

Tie the three roof ropes end to end, using knot shown (sketch No. 4) and lower it to the sidewalk.

Men at set-backs to guide the rope over the cornice as it is being lowered.

During strong wind it might be necessary to weigh down end of the rope with a weight of some kind.

Guide rope along some designated line of windows so that the stretch will be in a continuous straight line.

Order 3rd and 4th companies to the 16th floor with the following tools:

Three roof ropes, one axe, one claw tool, one hose roller.

Detach two men on the way up at the 6th floor with one of the roof ropes.

Order 5th company to lay out in front of the building the following hose:

Four lengths of 2½ in., 5 lengths of 3½ in. and 4 lengths of 3 in. hose.

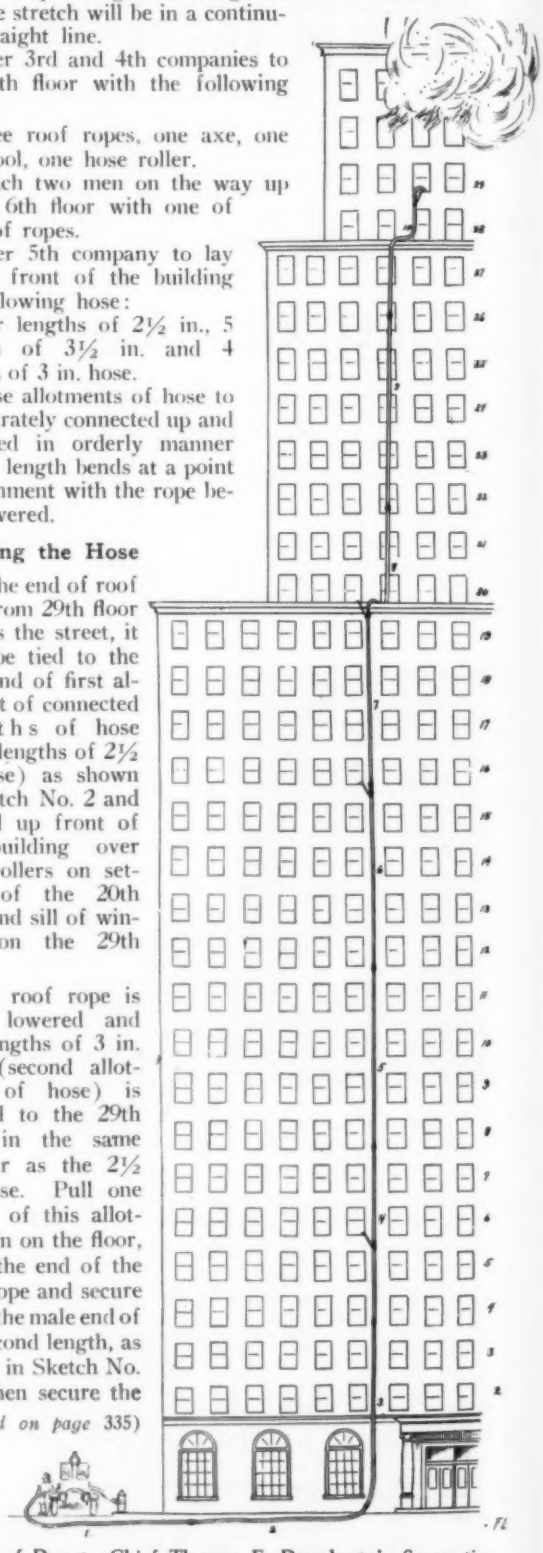
These allotments of hose to be separately connected up and arranged in orderly manner in half length bends at a point in alignment with the rope being lowered.

Hoisting the Hose

As the end of roof rope from 29th floor reaches the street, it is to be tied to the male end of first allotment of connected lengths of hose (four lengths of 2½ in. hose) as shown in Sketch No. 2 and hoisted up front of the building over hose rollers on set-back of the 20th floor and sill of window on the 29th floor.

The roof rope is again lowered and five lengths of 3 in. hose (second allotment of hose) is hoisted to the 29th floor in the same manner as the 2½ in. hose. Pull one length of this allotment in on the floor, untie the end of the roof rope and secure below the male end of the second length, as shown in Sketch No. 3. Then secure the

(*Cont'd on page* 335)



Sketch of Deputy Chief Thomas F. Dougherty's Suggestion for Getting Line of Hose in Operation on Thirtieth Floor, Where Elevators and Standpipe Are Out of Service

Numbers at right side designate floors of building; numbers alongside of hose show lengths of hose.

Classifying and Controlling the Firebug

Arson, Incendiarism and Pyromaniacy Are Degrees of This Crime— How Best to Control the Criminal — Difficulties of Conviction

By C. L. BARGREN, Fire Department, Rockford, Ill.

THE following article contains some excellent suggestions for the definition and handling of the general subject of incendiarism, and should be of value to chiefs in combatting this scourge of all fire departments:

In dealing with the subject of Arson, Incendiarism and Pyromaniacy, it is well to clearly define the three classes, so that each may become distinct and definite. It will help to expedite the judgment of the court, as to each offense, and should clear up for all time the muddled state of affairs which now seem to prevail. It would, in my opinion, be well to universally adopt these or other similar classifications, and formulate and incorporate them in state laws to govern each class in fixing sentences.

Classification

Arson is the act of setting fire to property by the owner, or his hirelings, to collect insurance, or to cover-up theft, or to destroy his property by fire to save demolition cost.

Incendiarism is the act of setting fire, or cause to be on fire, any property by, or for revenge, by other than the owner or his hirelings.

Pyromaniacy is divided into two classes, namely: one who has a superdeveloped craving for excitement, or heroism, with an attending lifting of mental strain; and the pyromania dementia praecox victim who gets a distinctive abnormal thrill from his act.

Methods

Alcohol, gasoline, and naphtha are used most often. Cleaning liquids and volatile fluids are used in general. Containers with string attached, to be pulled over on small kindled fires upon leaving the building, are used with highly inflamables. Electric wires are short circuited in advance to cover-up arson, making it appear that the fire was due to this cause. Small fires are started in oil soaked waste and refuse, to collect decoration and smoke damage. Incendiary fires are started from the outside usually. Inflammable bombs, firebrands, and oil soaked waste are thrown into buildings and basements. Pyromaniacs in general, try to gain admission to the building, and start a conflagration of major size. Stairways and recesses are chosen where the fire will gain rapid headway. The use of materials giving off intense smoke will be noticed. This type of criminal will be found in the crowd watching the activities of the firemen, and gloating over the success of his efforts.

Causes

The main reason, as we know, in the case of arson, is over-insurance. Some other reasons are: depleted and inferior stock, business competition and depression, large supplies of old or "dead" stock, firms selling out, covering-up inside thefts, large smoke and water damage policies, and worn out roofs on residences. The owner may burn down his building to get his insurance out before he wrecks it to build a new one. A man or firm may be refused insurance in one company and take out practically the same policy in some other; or he may take out several where it would pay him a handsome profit to collect on a fire. The insurance underwriter must be able to read human nature, use discretion, and profit by previous experiences. Consultation with the Bureau of Fire Prevention should be encouraged on excessive risks.

Incendiarism is caused by all types of revenge such as: encroachment of resident or business districts by undesirables, true and imaginary grievances, business jealousy and the destruction of delapitated hazards. Bootleggers set fire to too busy competitor's stills, and make the fire department a means to notify the police.

Pyromaniaism can occur at any time or place, under any and all conditions. No property or institution is immune from this form of depredation. Vacant, and excessively hazardous types of business are chosen by the "firebugs," because of the large and rapid fire accruing. They are night prowlers and get their thrill from seeing masses of flame shooting through the darkness. Highly occupied buildings are targets for another type. An overpowering sense of heroism and personal glory in rescuing trapped persons, has been the cause of many hospital, detention home, school, and apartment fires. An intense craving to see fire apparatus responding to calls, is the cause of many false alarms. This type develops into, and becomes, a pyro-bug, furnishing himself his real thrill finally in a fire, by which he can see fire administration put into practice.

Detection and Conviction

Detection of arson is quite simple. Conviction of arson is practically impossible in some states. Confessions by the arsonist, and good positive cases are liable

"THE courts, judges and lawmakers are the only ones who can deal with the fire criminal. Legislation must be introduced so that fire criminals can be punished without so much loss of time, and discarding of evidence. A county or district court with a fire judge, and a fire prosecuting attorney could be the solution, to handle all fire cases and nothing else."

to convictions, but through smart defense lawyers, and inexperienced prosecuting attorneys, only one in ten of these are ever sentenced. Incendiaries and pyromaniacs are easily convicted and sentenced if caught, and they *are* caught, by a process of elimination carried out by the police and fire departments.

A clothing business burned out on the last of seven arson attempts, with the aid of alcohol sprinkled about the store. A high total loss was paid on inferior stock on that store; and on two adjoining businesses, because of smoke and water damage.

The city suffered that loss to be added to its fire loss total for the year; the wear and tear on city apparatus was great over a period of hours; the fire districts were left open, and any large fire at the same time would find the department short-handed temporarily; that surrounding business district was immediately endangered; and 40 to 50 firemen's lives were endangered because of the flimsy construction of the building. Street car traffic was paralyzed; telephone and electric wires leveled; and employees were thrown out of work. A deputy state fire marshal was present during the combatting of the fire. He took steps immediately afterwards to bring charges, with the fire department cooperating.

All of the above charges are true, and were the result of a positively known case of arson, yet no convictions were ever obtained.

In all fairness this practice is not done by the business man who has the welfare and pride of his city close to his heart. But, it is done by the "fly by night" concern, which sells inferior quality merchandise, and which has no conception of civic pride.

Elimination of This Type of Fire Hazards

In these United States the fire insurance rates for individual cities are computed on the condition of hazardous buildings and businesses in the fire zones; and the equipment and alarm system employed by the city fire department.

Elimination of faulty property is hard to accomplish even through court action, and the result is buildings are standing today which should be remedied or rebuilt from a safety standpoint. The expense, of course, must be taken into consideration, and possibly the owner cannot carry such a financial burden. Still, when you think of the terrible death hazards involved on occupied buildings of this type, it seems that something should be done, because we must remember that every building is subject to the arsonist, incendiarist, and pyromaniac.

Old delapidated vacant buildings should not present such difficulties in demolition cases, where the fire insurance is cancelled, because they are not income bearing property. Yet because of the income tax partial exemption clause, these buildings stand to save the owner money by being idle.

Insurance companies must band together through their underwriters, and form a board of arbitration which shall have the power, if possible, to nullify all insurance on property carried by that individual or firm until serious conditions have been remedied; and to refuse as a body to insure prohibitive risks. More stringent actual inspections of merchandise and property by the underwriters when writing policies, and in the payments by adjusters, must be inaugurated if ever the fire loss is to be reduced.

The arson, incendiary, and pyromania loss in the United States for 1926 was 200 millions of dollars, or 2/5 of the total loss from all fire causes for that year.

People can be taught to be careful in the prevention,

(*Continued on page* 340)

Asst. Chief Hollingsworth Dead

Phillip Hollingsworth, veteran fireman and assistant chief of Anderson, Indiana, Department for thirty-eight years died at the age of seventy years.

Chief Hollingsworth entered the fire department August 13, 1886, as a volunteer and served four years. On September 1, 1890, when the paid department was organized, he entered as ladder man. In 1892 he was made captain and served in this office until 1894, when he was promoted to assistant chief. This rank he held until his death, March 19, 1928.

Chief Hollingsworth had enjoyed exceptionally good health until October 19, 1927. At this time he was on sick leave due to ulcers of the stomach. Just six months after he reported off duty, he died.

He leaves a widow, one brother William, and a sister Mrs. Sarah Wells.

The Late Asst. Chief Hollingsworth

Circumstantial Evidence Convicts Man

A resident of North Scranton, Pa., has been convicted of setting fire to his home, due to circumstantial evidence which pointed to arson activities. While the evidence was very strong it is one of the few times that a conviction has been obtained on those grounds.

Fire department officials told the court of finding oil-soaked rags hanging from crosspieces in the cellar. They also stated that they found plaster knocked from one of the rooms and oil-soaked rags inserted in the opening. Two containers of kerosene were found in the cellar.

Firetrap Hospital Ordered Razed

The Women's Chronic Division building of the Kings County Hospital in Brooklyn, N. Y., was ordered evacuated and razed because of very dangerous fire hazards that existed in the building. The order affected 260 inmates—some of them had lived in the building for twenty-five years. The patients will be removed to the Farm Colony at New Dorp, S. I., the Greenpoint Hospital and the new Coney Island Hospital.

The evacuation followed a confidential report to the acting mayor by John J. Dorman, fire commissioner. The fire department described conditions in the building as alarming.

The Board of Estimate has approved an appropriation for general improvements in the hospital, some time ago.

Toronto Adopts Uniform School Alarm

Every school in Toronto, Canada will have the same fire alarm signal, and it is hoped that eventually there will be a uniform signal of this type throughout the provinces. The standard signal is intended to avoid confusion.

Previous to this plan, each superintendent arranged a signal system to fit his own needs. Some were good and some were useless. With a standardization of signals, should a pupil transfer from one school to another, the child will know the proper fire signal. Cards bearing the printed rules and instructions will be distributed in the schools.

Children are warned not to put on their coats but to march quietly from the building. Senior pupils will be trained to take up positions at top and bottom of stairs and other places of danger to keep order and to assist any who may fall.

The signals are as follows:

Three bells indicate fire. The bell will keep on ringing while the children will march out of the building in orderly fashion.

Two bells are for the children to march back to their rooms.

One bell is for the pupils to stand at attention.

After halting, either three bells are sounded for the children to march from the building, or two bells for them to return to their rooms.

JOHN KARL LEE.

Why Not Cover Unprotected Openings?

Would Probably Have Headed Fire Off from Entering Warehouse — Suggested Method of Handling Fire

THE fire described in the last article of the series on administration was unique in that a fire department of limited apparatus and comparatively limited personnel brought a threatening fire under control in quick time but in so doing caused the destruction of a mill constructed warehouse building. The expansion of the grain in the warehouse, upon being wetted by the heavy streams, caused the wall to bulge and collapse.

The city in which this fire occurred had a population of around 30,000 and is located in the central west.

It is purely an agricultural town, at the center of a prosperous farming district. Outside of a few minor industries, practically all of the business of the town centers around agriculture.

The fire department consists of three engine companies, one chemical company, two hose companies and one truck company with the following equipment: Engine Co. No. 1, 500 gallon triple combination truck; Engine Co. No. 2, 250 gallon triple combination; Engine Co. No. 3, 500 gallon triple combination; Chemical No. 1, combination chemical and hose car carry 1,000 feet of 2½ inch hose, together with chemical equipment; Hose Co. No. 1, automobile hose wagon carrying 1,500 feet of 2½ inch hose; Hose Co. No. 2, identically the same as Hose Co. No. 1, and with the same hose capacity; Truck Co. No. 1, 75-ft. aerial truck, with usual assortment of shorter ladders.

The response to alarms is as follows: First alarm, Engine Co. No. 1, Hose Co. No. 2, Chemical Co. No. 1 and Hose Co. No. 2.

Engine Co. No. 3 remains in headquarters for special call.

Water Supply

The water supply may be classed as excellent, there being plenty of large capacity mains in the neighborhood of the plant and sufficient hydrants to accommodate all of the apparatus of the department.

Water pressure normally is 25 pounds for domestic use, but is raised to 65 to 75 pounds upon order of the fire department.

Construction and Occupancy of Plant

The plant involved in this fire consisted of several units and was devoted to cleaning, packing and storage of seed grain. Fannings from the grain were ground and sold as poultry feed.

The layout of the plant and surrounding buildings is shown in the diagram herewith, the feed grain establishment being located on the corner of Railroad and First Avenues.

To the left of the grain plant was a group of buildings devoted to various industries as indicated on the diagram.

South of the plant was a brick tenement, a live poultry market and a row of frame dwellings.

Buildings on the surrounding blocks are indicated in the sketch.

The feed grain warehouse building was of brick construction, 3 stories in height and of mill type. It was formerly used for manufacturing purposes and was later converted to a storage warehouse, with minor alterations. The warehouse was connected by open doorways on each floor to the building employed in fanning, grinding and packing of seed grain. This second building was of similar construction and the same height as the warehouse.

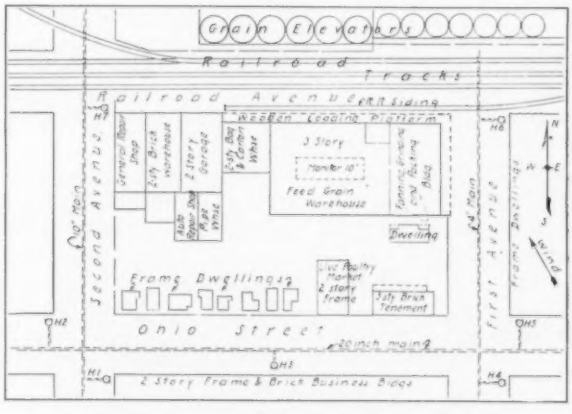
The warehouse was well filled on all floors with grain in sacks, packed closely and without aisles. The depth of grain varied from 5 to 8 feet on the three floors.

The Fire

The fire occurred on a hot summer day about 11 o'clock in the morning, through an explosion of dust in the grinding building. An alarm was immediately transmitted bringing out the first alarm assignment, consisting of Engine Co. No. 1, Hose Co. No. 1 and Truck Co. No. 1.

Suggested Method of Handling the Fire

As to whether or not the department could have prevented the floors from going through is uncertain. It is possible, however, that a distinct change in the method of operating on this fire might have prevented the fire from entering the warehouse, but permitting the fire to burn with little opposition in the grinding building until the arrival of additional apparatus.



The following is the suggested method of handling this fire: Upon the arrival of the first alarm assignment the fire has fully involved the ground floor and is traveling upward. A quick inspection in the grain warehouse will show that the doors are open and instead of operating on the fire directly, the first lines should be brought into to cover these doorways. Place Engine No. 1 at hydrant No. 5 as done by the fire department, and stretch in two lines each with a 1¼ inch nozzle (in the article of the last issue of this journal these nozzles were given as 1¾ inch, which was an error). One of these lines to operate on the ground floor to hold the fire from coming into the warehouse and the other to go to the second floor to likewise cover the doorway. If there is a doorway between the basements of the two buildings, have truck Co. No. 4 stretch single line to the basement of the feed warehouse and have them cover the doorway. Other members of the truck company in the meantime should open up the windows and doors of the feed ware-

house to provide plenty of ventilation so that the men operating on the various floors will not have to take unnecessary punishment and possibly have no retreat from their positions.

Station Hose Co. No. 1 at hydrant No. 6 and stretch in two lines to the ground floor of the grinding building.

A second alarm should be transmitted immediately upon the arrival of the first alarm apparatus and upon noting the condition of the fire.

Second Alarm Assignments

Apparatus on second alarm may be assigned as follows: It being assumed that the grinding building is also three stories in height—the same as the warehouse—Engine Co. No. 2 stretch in two lines from hydrant No. 1, one going the second floor by way of ladder and the other to the top floor.

Hose Co. No. 2 stretch in a single line from hydrant No. 3 to the ground floor of the grinding building and another line, if the hose is available, to the second floor of the grinding building from the south side. By this arrangement there will be six lines in operation on the fire itself and three covering the openings on the various floors in the feed and grain warehouse.

The lines operating within the grain warehouse will, of course, attempt to drive the fire back from the doorways and if the doorways are equipped with fire doors, these fire doors should be closed. Otherwise it will be necessary for the lines to hold their position during the course of the fire.

As soon as the lines on the ground floor have gotten the fire under control they should follow up to the floor above and finally to the third floor by means of ladders, or by stairways if they are still secure and if there is no danger of the floors above giving way.

This is about the only method this fire can be handled with the limited apparatus, and particularly limited engine capacity.

It is believed, however, that the six lines operating on the fire from the outside plus the three from within the grain warehouse can bring it under control.

If the fire is prevented from entering the warehouse, there will be no danger of the floors giving way as in the case where the fire department permitted the fire to enter this building and subsequently drenched it out with heavy streams.

WORK OF DETROIT ARSON SQUAD STOPS MANY INCENDIARY FIRES

Frequently Set to Obtain Revenge—Insane Person Found to Have Set Many Incendiary Fires in City—Burglars Make Fires to Hide Crimes

By WM. JEROME DALY.

EVEN though the Detroit Arson Squad consists of but two men, and only one of those a regular police officer, the incendiary fire loss in Detroit last year was kept down to $318,372.02. The city's loss from incendiary fires in 1921, the year before the Arson Squad was organized, was $755,112.35.

Police Sergeant George W. Smith and William F. McDonald, a special officer, constitute the squad. It is an integral part of the Fire Prevention Bureau. During the past year, the Arson Squad investigated 512 fires of suspicious origin. Of that number 108 were found to be of an incendiary nature and 404 were classed as accidental. The incendiary fires were grouped as follows:

Thirty-eight to defraud the insurer; thirty-three for revenge; thirty-two by pyromaniacs; and five to conceal other crimes. Sixty-six of the fires occurred while the arson investigators were off duty and the calls were responded to from the investigators' homes.

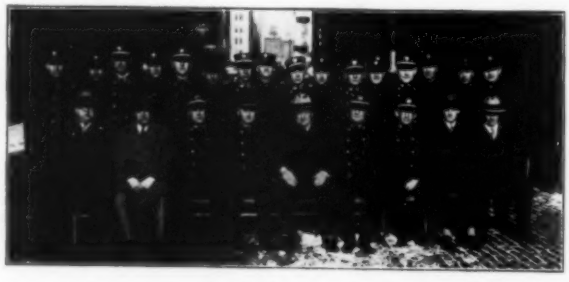
In addition to the regular work of investigation and prosecution, the squad was instrumental in having an entire new arson statute drafted and passed by the legislature. The defendants in the first fifty-three cases tried under the new law, pleaded guilty. The squad was also instrumental in having the ordinance against false fire alarms rescinded so that the state law could be applied. Then the state law was amended to increase the fine and imprisonment.

"The fact that only $18,200.74 in loss was caused by the thirty-two incendiary fires set by pyromaniacs" says Sergeant Smith in his annual report, "is nothing less than a miracle, as fifteen of these fires were set by one person, in places where there was every opportunity to cause a large loss." Mr. Smith is seated second from the left in the illustration.

James Keith, a pyromaniac and a guest at the Normandie Hotel, was arrested on suspicion in connection with nine fires set in that hotel.

The report further states, "after his arrest, he confessed to setting all of these fires, as well as eight others in one afternoon in four downtown office buildings, while the major part of the fire apparatus was engaged in extinguishing a fire alarm fire five miles away. It was learned that Keith was formerly employed at the University of Michigan Hospital, at Ann Arbor, as a porter, where a three story frame building which housed 300 helpless patients, was destroyed by fire February 1, 1927.

"He admitted setting this fire and that after doing so, he returned to the scene of the fire a few minutes later and helped to rescue the patients, who were all removed to the lobby of the Jennings Hotel, directly across the street. He then went to the basement of the hotel and set it on fire and then assisted in removing the hospital patients from the lobby of the hotel to the street. Keith stated further that he had set many other fires throughout the country but could not remember when or where. He was examined by a sanity commission and found to be insane, and was committed to the Ionia State Prison for the criminal insane."



Detroit Fire Dept. Fire Prevention Bureau

Standing (left to right): George F. Sandvik, Louis A. Premeau, Frank C. Wissel, Edward Sawtell, John A. Torsch, Archie M. Buck, Charles W. Frederick, W. Schroeder, Coleman D. Carroll, Fred. W. Schuknecht, Malcolm O. Baxter, Roderick J. Schuholtz, John Sytniewski.

Seated (left to right): William F. McDonald, George W. Smith (in charge of Arson Squad), Frank Converse, Gabriel S. Goldwater (Fire Marshal), Fire Commissioner A. A. Schantz (chairman of Fire Prevention Committee), Colin P. Brown, Henry T. Moiles, William I. Mitchell, George C. Walsh.

The loss of $5,363.97 caused by fire set to conceal other crimes, was set by burglars who broke into homes and business places and stole property, and set the places afire to make it appear that the property had been consumed by an accidental fire.

New Britain Honors Old Timers

Members of the fire department in New Britain, Conn., who have been in the service twenty-five years or more, were honored at a testimonial dinner at the Burritt Hotel. Chairman Cornelius J. Dehm of the board was toastmaster, and the other members of the board were also present.

The fire veterans who were thus honored were Chief William J. Noble, Deputy Chiefs Eugene F. Barnes and Michael Souney, Electrical Superintendent George Cooley, Captains Victor Davis, William Porter, James Crowe, Lieut. Thomas L. Hinchey and Firemen Edward Parker, William Frey, William Kelly and Richard Forsythe. The men were presented with service bars that they will wear on their uniforms.

George Cooley, affectionately called the father of the city's fire alarm system, has been in the service for fifty years.

Chief Noble told the history of the fire department and the changes that have taken place during the past twenty-five years. The firemen expressed their gratitude to the fire commissioners for the testimonial dinner arranged to honor the old timers. Mr. Cooley praised Chief Noble as "a man, a fighter and a gentleman."

WITH THE EDITOR

Quick Evacuation of Fire Trap Hospital

Prompt action of the New York City Board of Estimate, following a confidential report by Fire Commissioner John J. Dorman, caused the rapid evacuation of patients from the Women's Chronic Division Building of the Kings County Hospital on April 9. Four hours after the peremptory order from the board had been issued, ambulances were engaged in transporting the more feeble inmates of the building to other quarters. While this action was primarily the result of a presentment from the Kings County Grand Jury, stressing the bad fire hazard of the building, it developed that the Fire Department had issued a declaration of violation against the structure as far back as 1923.

The Estimate Board and the Welfare Department each state that the other is responsible for this deplorable state of affairs. The Board claims that this is the first intimation they have had of the bad condition of the building, while the department asserts that it has received no funds for the replacement of the condemned structure.

In the meantime the helpless patients in the old building, which had been built in 1879, were subjected to the constant danger of a death by fire, while the red tape of officialdom was being slowly unwound to effect the remedy, which the recommendation of the Fire Commissioner brought about in a few hours.

Uniform School Fire Alarm

A plan to be recommended to the various cities in the United States is one just adopted in Toronto, Canada. It consists of a uniform school fire alarm signal. Heretofore the signals of the various schools of the Canadian city, as do those of many of the cities in this country, varied and were regulated largely by the ideas of the principal in charge of the particular school. Now a standard series of signals has been adopted, which will not only be used in all of the schools of the Ontario city, but, it is hoped by the originators, be adopted as the standard by all of the cities of the Dominion.

The signals total three: one bell calls the scholars to assemble at a given point, ready to march from the building; three bells indicates a fire and is a signal to march out; and two bells is the order to return to their desks. With the adoption of this method will be included printed rules prescribing the procedure so that in all cases the action will be the same.

The advantage of this plan is that of uniformity. The pupils all will know exactly what is expected of them when an alarm is sounded on the bell. There will be less chance of hesitation and confusion.

Another advantage of the uniformity will be that when a pupil is transferred from one school to another, he or she will already understand the signals.

Such a system could well be adopted in all cities which now rely upon the arrangements made by principals of schools as regards fire drills and provisions for quickly emptying the school in case of fire. A uniform school fire alarm and drill system would work toward steadiness in the scholars in case of emergency and would remove that bugbear of the teachers' existence—the fear of panic among the scholars. Such system might also provide for compulsory periodic fire drills, for without these the signals would be of little avail. The scholars must actually go through the evolutions to become familiar with them, and to act, when the time of real danger arrives, almost automatically in the matter of the assembly and passage from the building. Only by this means can the schools be assured of the minimum of danger from fire and panic.

Protecting Firemen from Liability

Bills recently passed by the New York State Legislature which would place liability on cities and villages for damages suffered through the operation of fire apparatus have been vetoed by Governor Smith. The law at present makes the driver of any apparatus, which causes any damage, personally liable. In giving his reasons for vetoing the measures and in response to a protest at a hearing to reconsider the bills, the Governor said: "You know that the fireman, in responding to the call, must necessarily break all sorts of laws and regulations in order to get to the fire. You, then, want the city to assume liability for an offence against which it must admit it has no defense. The remedy of the driver of a fire apparatus against whom there is a judgment is found in the Court of Claims."

This may all be very true and equitable, but, nevertheless, the fireman is engaged upon city business when the accident occurs and is doing his best to protect the lives and property of the citizens. Hence the city in whose service he takes such risks should protect him when an accident occurs while in this service. Liability of the fire truck driver may result in the loss of the man's home and property and exert hardship upon him.

No department driver speeds just for the love of thrill. Nor does any driver get more money because, in the faithful discharge of his duties, he submits himself to the risk of personal injury by trying to get to the

scene of the fire in the shortest possible time—with safety.

If he is to be held personally liable for any damage done by the truck, either he will consider his own interest first—or else he will make every possible attempt to escape the task of driving.

The remedy for this state of affairs should be found in the taking out of liability and property damage insurance by the municipality in the fireman's favor, so as to fully cover him in case of accident. By this means the city assumes no direct responsibility for his acts, but at the same time he is protected from the danger of losing his personal property through any untoward happening while in the performance of his duty. It is the least the municipality can do for its firemen, who daily risk their lives in its service, and who certainly should not be asked to assume the added responsibility for accidents to citizens, who, by their carelessness or ignorance, get in the way of the apparatus answering alarms of fire. For it is rare that such accidents do not contain some elements of contributory negligence on the part of the injured.

Such insurance by the city or village would also make the service more attractive to the average substantial citizen. It is quite natural that men who own their own homes should hesitate to qualify as drivers, when such service may mean at any time the loss of hard earned property which may have taken them a lifetime to accumulate. And one can hardly blame them!

Fredericksburg Honors Old Apparatus

"Lily of the Swamp" is not a very suggestive name. It fails to convey the affection that the community of Fredericksburg, Md., has for a steam pumper that has served the city for fifty years.

The engine was delivered on February 22, 1878, and was built by Clapp and Jones Manufacturing Co., Hudson, N. Y. It was sold on the guarantee that it would deliver a better fire stream

"Lily of Swamp," Pumper Placed in Service Fifty Years Ago

than the apparatus then in service in that district. The pump fulfilled its guarantee.

With the development of motorized apparatus, "Lily of the Swamp" was held as a reserve piece of apparatus. But recently a program has been held to honor the fiftieth anniversary of the steam engine. Her old time crew forgot their rheumatic pains and had the old machine pumping to show that it could still deliver a good sized stream. The veteran member was fully honored in song and story at a banquet held in the evening.

Plans Made for N. E. Chiefs' Exhibits

Frank M. Tiffany, chairman of the Exhibit Committee of the New England Association of Fire Chiefs, reports that a large amount of space has already been reserved in the Memorial Auditorium at Burlington, Vt., for display of fire apparatus during the Sixth Annual Convention of the association on June 26–29.

The following letter has been mailed to exhibitors and prospective exhibitors:

"We respectfully desire to call your attention to the fact that the Sixth Annual Convention of the New England Association of Fire Chiefs will be held at Burlington, Vt., June 26 to 29, inclusive.

"It is the desire of the Exhibit Committee to make this the best and largest exhibit yet shown by the association. Those

New Memorial Auditorium in Burlington Where Exhibits Will Be Held

manufacturers and dealers in fire fighting equipment and accessories who have previously exhibited at these conventions we believe have been amply repaid for their time and efforts. We trust that you will again honor us with your presence. To those who have not as yet exhibited, we extend a most hearty welcome. Enclosed find two contracts. Kindly sign both and return one to the committee as per instructions, selecting your space and same will be reserved for you. Do not let this opportunity pass by as the committee feel assured that the exhibition will be of great benefit to all concerned. Vermont wants you to come. Address all communications to 1022 Commonwealth Avenue, Boston, Mass."

The letter was signed by Frank M. Tiffany and Alfred H. Koltonski, exhibit committee, N. E. A. F. C.

HARRY BELKNAP.

Texas Pushes Standardization Work

Many municipalities in Texas have converted the threads on fire hydrants, fire hose and fire apparatus to that of the National standard, also called the "American standard" thread. This design calls for an outside diameter of 3 1/16-inch and 7½ threads an inch. Some of the cities thus far standardized are as follows:

LaGrange, Waelder, Flatonia, Schulenberg, Weimar, Columbus, Eagle Lake, Moulton, Gonzales, Shiner, Hallettsville, Yoakum, Fayetteville, Palestine, Center, San Augustine, Alto, Brenham, Bryan, Calvert, College Station, Crockett, Groveton, Hearne, Livingston, Lufkin, Madisonville, Nacogdoches, Navasota, Rusk, Timpson, Trinity, Arkansas Pass, Beeville, Caldwell, Cuero, Elgin, George West, Giddings, Gregory, Huntsville, Kenedy, Nordheim, Port Lavaca, Robstown, Runge, Sinton, Somerville, Taft, Three Rivers, Victoria, Yorktown, Alice, Bastrop, Belton, Bishop, Coleman, Cooledge, Floresville, Groesbeck, Jourdanton, Karnes City, Kerrville, Luling, North Pleasanton, Pleasanton, Poth, Smithville, Teague and Wortham.

Fort Worth has purchased a set of standardization tools and have started work on reconverting the threads. At the present time, the work will be pushed in the north and northeastern section of the state during the Summer months.

Union City, Mich., Has Rural Protection—Union City, Mich., has officially accepted fire apparatus purchased at a cost of $4,000 for rural fire protection.

Ex-Chief of Jerseyville, Ill., Dead—Joseph H. Williamson, for many years chief of the department in Jerseyville, Ill., died at Culver City, Cal., where he had gone to spend the remainder of the winter with his daughter.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified.

Capacity of Pumper at Different Pressures

To the Editor:

We would be very grateful if you would answer the following questions in the Questions and Answers Department of your next issue:

A pumper has a capacity of 700 gallons per minute at 150 pounds pressure. If the pressure is increased to 175 pounds the discharge decreases.

Question 1. If the pressure is decreased to 125 pounds does the discharge increase?

Question 2. What is the greatest pressure that can be had from the above pumper?

Question 3. Give formula for finding answer to question 1. H. W.

Answer 1: Yes, the discharge can be increased if the pressure is reduced.

Answer 2: This question cannot be answered, for it depends entirely upon the power of your motor, the gear arrangement, and the strength of the pump itself.

Pumps are so powered and geared that they will give maximum discharge at various pressures likely to be required in fire service. They are not built just to create pressures alone, for capacity is as important as pressure. As the different types of pumps are built along different principles, each make of pump would have a different maximum pressure as well as discharge, and in any specific case it could only be determined by tests.

Answer 3: The National Board of Fire Underwriters have suggested the following practical standards on pumping engine capabilities at different pressures: At 120 lbs. engine pressure, full rated capacity; at 200 lbs. engine pressure, one-half rated capacity; at 250 lbs. pressure, one-third rated capacity.

The rule employed in figuring the capacities of pumping engines at different pressures when working fire department promotional examination problems is as follows: Multiply the rated discharge by the rated pressure and divide this product by the pressure at which you wish to find the discharge. As an example, if an engine has a rated discharge of 700 gallons per minute at 120 lbs. pump pressure and you wish to find the discharge at 150 lbs. pressure, you would multiply 700 by 120 and divide the product by 150, giving 560 gallons per minute.

This method, it should be mentioned, does not give accurate results, but is only a theoretical solution for discharge based upon the assumption that the same power is utilized irrespective of the discharge or pressure. Nor does it take into account the question of slippage.

Hazards of Muriatic Acid

To the Editor:

During the past year a law was passed in this state making it compulsory to wash all apples sprayed with arsenate of lead. Muriatic and hydrochloric acids are used in great quantities. I would be very much obliged if you would explain the effects of both acids as regards life and fire. There are large quantities of both acids stored in warehouses and cold storage plants in this city. A. M.

Answer: Arsenate of lead has no fire hazard but it is a very poisonous material if taken internally. The fact that it is shipped in wooden barrels is sufficient evidence of the absence of fire hazard.

Muriatic and hydrochloric acids are the same. They are technically known as "hydrochloric acid" although the name muriatic is frequently used. Hydrochloric acid is a clear, colorless or slightly yellow, fuming, pungent liquid, and is poisonous if taken internally.

The fumes, like those of chlorine, may do serious damage if inhaled in quantities, but as they are pungent they give sufficient warning of their presence so that the firemen can be on their guard.

While highly corrosive to certain metals, hydrochloric acid constitutes no fire hazard. It is shipped in wooden tank cars or wooden barrels.

Care of Cotton Hose

To the Editor:

What care should be given cotton hose used in school buildings?

Is it better to test out the hose, say once a year, or to keep it dry and forego the tests?

How long is it safe to rely on such hose before replacing? K. F. A.

Answer: As you do not state that the hose is lined, it is assumed that it is unlined and in this case is, in all probability, unlined linen hose, as unlined cotton hose is not used for fire protection purposes.

On this assumption, it is better not to test the hose. Unlined linen hose will last indefinitely if not exposed to the elements and if not subject to abuse. On the other hand, testing of the hose and the consequent saturation of the fabric would tend to shorten its life; also, linen hose when tested and replaced will never hang as evenly as untested hose with a result that tested hose always looks carelessly hung.

As to the life of such hose, when not abused or subjected to test or frequent use, it may be one, two or more decades.

Here's a precaution which must be observed: In public buildings the couplings, nozzle, and other brass work on the hose are frequently polished to keep them attractive. Polishing pastes employing oxalic acid and other materials destructive to hose fabrics are employed. If the polishing is carelessly done and if some of the paste gets on the hose near the coupling the hose will be materially weakened and the couplings may subsequently blow off when the hose is brought into play.

Should the hose you have in mind be cotton rubber lined hose, it is advisable to test it at least once a year and to run water through the hose about every two months. This operation will tend to keep the rubber in good condition and prevent cracking which would otherwise occur by the rubber lining "aging out."

Determining Size of Nozzle

To the Editor:

I would greatly appreciate an answer to the following problem at your earliest convenience, giving full details, formulas, etc.

An engine at 150 pounds pressure is pumping through two parallel lines of 3-inch hose each 300 feet long to a siamese connection from which is stretched 200 feet of 2½ inch hose. 50 pounds is desired at the nozzle. What size nozzle should be employed in order to secure 50 pounds nozzle pressure with the above layout and engine pressure as given?

Also, in a recent issue you printed an article where a New York fire officer used water and foam at a fire in the kettle plant of a varnish factory to no avail, but extinguished the fire with a carbon dioxide gas extinguisher. Is it true that foam was used to no avail? T. F. A.

Answer: The first step in this solution is to reduce the two 300 foot lines of hose to a single line of 2½ inch. The factor

for reducing parallel 3 inch lines to 2½ inch is 9.35 300 ÷ 9.35 = 32.1 feet of 2½ inch hose. Add this to the 200 foot stretch of 2½ inch hose and we get a total length of 232.1 feet of 2½ inch hose which represents the layout as given in the problem. The problem may then be considered as an engine at 150 pounds pressure pumping through 232.1 feet of 2½ inch hose to a nozzle, the pressure at which is 50 pounds. The problem is to find the size of nozzle.

Employ the Underwriters' formula. Engine pressure = nozzle pressure x (1.1 + KL).

Put the values we already have into this formula and then solve for the value of K. Engine pressure we know is 150 pounds; nozzle pressure is 50 pounds; L, the number of 50 foot lengths of hose in the line is 4.64.

Solving out, we find K equals 0.41.

Now checking over the values of K for different sizes of nozzles on a single stretch of 2½ inch hose, we find that K for a 1½ inch nozzle is .505 and for a 1⅜ inch nozzle is .341. The latter figure is the nearest to that we get by our solution and therefore the nozzle we would have to employ to get 50 pounds pressure or thereabouts would have to be 1⅜ inch in diameter.

Now let us check this up and see what we get by solving for nozzle pressure with a 1⅜ inch nozzle.

N. P. = E. P. ÷ (1.1 + K x L)
N. P. = 150 ÷ (1.1 + .341 x 4.64)
= 150 ÷ 2.68
= 56 pounds nozzle pressure, which is near enough to the nozzle pressure desired.

With regard to the second question you ask, the report as furnished to this office was vouched for by the manufacturer of the carbon dioxide gas extinguisher employed. It may be added here that foam extinguishers are ineffective in extinguishing fire in alcohol and carbon disulphide, both of which fluids are commonly employed in manufacture of varnish. It is very likely that one or both were encountered at this fire, if foam did not work satisfactorily. As far as the use of water goes, there is danger in employing water where large quantities of inflammable liquids are afire and where the temperature has reached a high point.

UNPROTECTED CAST IRON COLUMNS FAIL UNDER FIRE EXPOSURE

New York Board of Fire Underwriters Draws Conclusions from Butler Brothers' Fire in New York City—Vertical Shafts Must Be Protected

THE Bureau of Surveys of the New York Board of Fire Underwriters has reported that the collapse of part of the eight story building afire at No. 495-97 Broadway through to No. 66-68 Mercer street, New York City, at one o'clock in the morning of December 29th last was due to heat against unprotected cast iron columns.

Accordingly, the New York Fire Department issued a special order to the force the day following the publication of the Underwriters' report:

I. Company Commanders shall report all buildings in their company district in which floors are supported by unprotected cast iron columns. Reports shall be forwarded to the Office Chief of Department on April 9, 1928.

II. Company Commanders will have a re-inspection made of premises where members of the Central Building Inspection Squad have found cause for complaint. Re-inspections will be made ten days after original inspection and a report forwarded stating whether or not conditions have been corrected.

Collapsed Columns in Basement Showing Fractures

The fire was reported at length in FIRE ENGINEERING in the issue of January 11, 1928. The miraculous escape of several companies of firemen whose entrance into the building was providentially retarded by the failure of an automatic fire alarm, plus the difficulty of opening red hot doors and shutters, as told in the original story, are borne out in detail by the survey of the Underwriters, which in part runs as follows:

The building was erected in 1897, eight stories in height, with a basement and sub-basement. Covering an area of 9500 square feet, it was constructed of incombustible material, but was not fireproof as the important structural members were entirely unprotected against fire. The walls were independent of brick 36-16 inches in thickness. The floors were single 7/8-inch matched flooring on wood sleepers, filled between with cinder concrete, on eight inch hollow tile segmental arches, supported by twenty-five feet steel I beams, spaced twelve feet on centers and tied together by two 1½-inch diameter tie rods, spaced eight feet apart. The beams, together with one central line of steel I girders, were all supported on one central row of cast iron columns, also twelve feet on centers, while the other ends of the beams were supported on blue stone blocks in the side walls. The cast iron columns were sixteen inches in diameter in the sub-basement and diminished an inch or two a floor to a diameter of six inches on the eighth floor.

The beams and girders were supported on brackets cast on the quarter and as integral parts of the columns and were fastened to ear lugs, also cast on the quarter and as integral parts of the columns by two ¾-inch bolts. The columns with their brackets, ear lugs and the method of supporting and fastening the members together were typical of this type of construction. The stairs and elevators were all located on the south side of the building, except for one elevator that was located in the northwest corner. There were two stairs, one at the Broadway end of the building and one at the Mercer Street end, both extending to the eighth floor, unenclosed. Two elevators located at the Broadway end of the building extended to the top floor and were not enclosed except by open iron grillwork. Two freight elevators, one in each corner of the building at the west end, were the only shaft openings through the floors that were involved in the fire. These elevators extended from the sub-basement to the eighth floor and were enclosed in three inch tile shafts with wood doors having thin glass panels to floors.

Occupancy and Protection

The various floors were used principally for the display of sample goods and for offices. The floor loads were comparatively light as the floors were occupied by sample goods.

The building was equipped with an approved automatic fire alarm system of the Automatic Fire Alarm Company.

A standpipe system, of questionable value, with two 4-inch risers was also installed in the building, and the basement and sub-basement were equipped with automatic sprinklers with siamese connections on streets for the fire department.

Originating in the basement at the Mercer Street end, in a portion used as a shipping and packing room, the fire had extended to a portion of the eighth floor at the Mercer Street end through the two freight elevator shafts before it was discovered. Although the building was equipped with an automatic fire alarm, this alarm system failed to operate and the fire was first discovered by a police officer, who sent an alarm through a public alarm box.

Structural Collapse

Shortly after the arrival of the fire department's first alarm companies and prior to the arrival of the third alarm companies, or about twelve minutes from the time of the first alarm, a partial collapse of the building occurred. The portion that collapsed begins at a point twenty-four feet from the Mercer Street end of the building, extends a distance of thirty-six feet toward the Broadway end, and the entire width and height of the building about 1,800 sq. ft. in area. Six floor arches of each floor, together with two lines of columns above the basement, collapsed on a line with the second and fifth row of columns from the Mercer Street end, the debris crashing through the basement floor and piling itself in a heap, reaching as high as the second floor.

(*Continued on page* 339)

HEAVY NEWS PRESSES ENDANGER FIREMEN AT SCRANTON BLAZE

Three-Alarm Fire Weakens Building Loaded with Paper and Machinery—Many Reporters Rescued by Department—Nearby Structures Saved

ALL firemen on the day platoon were called out to fight a fire that gutted the four-story brick building of the Scranton "Republican," a newspaper publishing plant in Scranton, Pa. Thirteen firemen were injured, but none seriously, during the five hours that the department was on duty.

Pressmen were making ready for the first edition of the newspaper when a blinding flash came from the switchboard controlling the large presses, and was followed by a burst of fire. Within a few moments, the entire press room was involved, and the men had barely enough time to escape. Men at work in the editorial rooms were unaware of what was happening in the press room, until some one shouted, "Fire." The reporters remained at their desk as long as possible, and many had exciting escapes. Firemen brought a number of them down ladders.

Newspaper Plant of the Scranton Republican, Gutted by Fire the Morning of April 4

Assistant Chief Lewis responded on the first alarm. As soon as he entered the building and noted the intensity of the blaze, he ordered a second alarm. This brought Chief Peter J. Rosar, superintendent of the Bureau of Fire, Assistant Superintendent Charles Harman and six companies. Shortly after Chief Rosar arrived, he ordered a third alarm turned in. Within thirty minutes, all firemen on the day platoon had been called out, including all the battalion chiefs.

Fearing that the weakened floors, heavily loaded with machinery would collapse, Chief Rosar ordered his men out of the danger zone. Linotype machine buried under a portion of the caved-in roof, were in constant danger of crashing through to the basement. The walls were in danger of crashing, but they held.

Water was furnished through eight hydrants. Only four of the city's fire companies were held in reserve. Mains varied in diameter from six to twenty-four inches. Two turret pipes with 1½-inch tips were used, and one ladder pipe with the same size tip. Twelve hose lines were used.

Engines in service were as follows: Two 1,000-gallon American-LaFrance pumpers, two 750-gallon American-LaFrance pumpers, one 900-gallon Metropolitan steam engine, one Seagrave 85-foot aerial ladder, one American-LaFrance 75-foot aerial ladder, one American-LaFrance city service truck.

Despite the intensity of the blaze, firemen succeeded in saving the adjoining buildings from both fire and water damage.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands.

Week Ending April 6

NEWBURGH, N. Y.—Garage of Public Service Corp.	170
BATTLE CREEK, MICH.—St. Phillips R. E. Church	175
GREENWICH, CONN.—Residence of Samuel Fuller	30
FAIRLAND, IND.—School bldg. destroyed	65
MANNING, IOWA.—Milwaukee grain elevator destroyed	50
AUSTIN, TEX.—Gymnasium of University of Texas	25
SEAGRAVES, TEX.—Business district damaged	400
OTTAWA, ONT.—Property of Earl Stinson, also adj. bldgs.	25
LYNN, MASS.—Restaurant of Sherrard, Inc.	25
JERSEY CITY, N. J.—Factory of Winchester-Muhlberg Co.	65
SEAFORD, DEL.—High school bldg. destroyed	30
BLUE POINT, L. I. N. Y.—Anchorage Inn, Montauk Highway	25
BUFFALO, N. Y.—Plant of Buffalo Flour Mills	250
MONETTE, ARK.— Business bldgs. destroyed	40
XENIA, OHIO.—Xenia Hatchery and adj. property	50
PLATTSBURG, N. Y.—Clinton Theatre bldg. and adj. property	150
BIG RAPIDS, MICH.—Plant No. 2 of Falcon Mfg. Co.	40
TYRE, MICH.— Tyre Elevator owned by R. Thomas	30
INDIANAPOLIS, IND.—Carpenter shop of Armour & Co.	65
MONESSEN, PA.—Home of Fraternal Order of Eagles	165
KANE, PA.—Business district damaged	150
CRISFIELD, MD.—Residences and business bldgs.	700

Small Blaze Ties Up Elevated Railroad

Although the fire itself was of minor importance as far as actual damage was concerned, the blaze crippled service on the Sixth Avenue Elevated Line in New York City, and delayed thousands of workers in the down town section. The fire started in an elevated railway car near Cortland street and even hampered service on the street car lines below. Luckily it did not interfere with the subway tracks just underneath. Firemen are here shown fighting the flames in the wooden car, caused by a short circuit.

Firemen Do Good Work At Albany Hospital Fire

Shortly after fire had broken out in an upper floor of the Memorial Hospital, Albany, N. Y., firemen carried two hundred patients safely down the ladders, fire escapes and elevators. It required a great deal of tact to calm the fears of sick or bed-ridden inmates.

HARRINGTON, DEL.—Bldg. housing Harrington Journal..... 40
PEKIN, ILL.—Belden Lumber Yard and adj. property..... 170
SARATOGA SPRINGS, N. Y.—Bldgs. on Leonard Farm..... 25
PITTSBURGH, PA.—Millholland Co. Machine Shop..... 30
BOSTON, MASS.—Six story bldg. on Pearl Street..... 30
WATERLOO, N. Y.—Garage containing 90 automobiles..... 125
ROANOKE, VA.—Gilmers Dept. Store damaged..... 165
NASHVILLE, TENN.—B. Y. Johnson plant and adj. property.. 150
SCRANTON, PA.—Plant of Scranton Republican destroyed.... 400
ST. MARY'S, PA.—Two blocks of business property..... 100
KEEGO HARBOR, MICH.—Residence of Ora Hammaker..... 100
KAWKAWLIN, MICH.—Kawkawlin Bean & Grain Elevator Co. 40
OCEAN CITY, N. J.—8 Business bldgs. destroyed..... 175
BEDFORD, VA.—Bedford Johnson Woolen mill destroyed..... 250
COLUMBUS, OHIO.—Yards of Linden Lumber Co..... 65

Week Ending April 13

ROLANDSVILLE, MD.—Plant of Morocco Roofing Co..... 400
BAYONNE, N. J.—Plant of Bayonne Bolt Corp..... 250
LA BELLE, FLA.—Royal Palm Hotel and adj. property..... 65
INDIANAPOLIS, IND.—Property of Wm. Lilly Paint Co..... 25
ST. CLAIRSVILLE, OHIO.—Hoge and Lorentz bldgs..... 80
BRIARCLIFF MANOR, N. Y.—Business property at Briarcliff.. 120
SCHENECTADY, N. Y.—Franklin Warehouse & adj. property.. 75
REED CITY, MICH.—Property of Central Dry Kiln Co..... 25
HARTFORD, CONN.—Bldg. corner of Asylum & Main Sts.... 25
METHUEN, MASS.—Icehouses of Lawrence Ice Co..... 25
VANCOUVER, WASH.—Reder Drug Store damaged..... 25
FAIRFIELD, CONN.—Fairfield Beach Club destroyed..... 40
SPOKANE, WASH.—Paint shops of Great Northern R. R..... 80
ROWLANDSVILLE, PA.—Plant of Morocco Roofing Paper Co.. 300
DAYTON, OHIO.—St. Joseph's Parochial School..... 150
GRESHAM, NEB.—Bldg. og Brittell Furniture Co..... 50
CHICAGO, ILL.—Yards of Ridge Lumber Co..... 65
HARRISBURG, ILL.—Plant of Harrisburg Packing Co..... 80
YUMA, ARIZ.—Warehouse of Blalack & Whitman Seed Co..... 80
COOPERSBURG, PA.—Several business establishments..... 65
JOHNSONBURG, PA.—Center Street business property..... 80
GRAND RAPIDS, MICH.—Grand Rapids Gas & Electric Co.... 200
LONOKE, ARK.—Nine business buildings destroyed..... 80
HANTSPORT, N. S.—Hancock property destroyed..... 25
SIMMESPORT, LA.—Magee Hotel and adj. property..... 65
KELOWA, B. C.—Plant of Dominion Canners..... 150

Chief Landrey Asked to Resign

Official charges are being prepared against Chief George Landrey of Troy, Ohio, who has been asked to resign by the mayor and who refused to do so.

The mayor stated that the administration feels a change in the fire department will be of benefit to the city. He said his move is in the interest of harmony and efficiency.

But the chief refuses to believe this. He is waiting for official charges to be presented. It has been known that friction between the two heads had existed for some time. It came to a point due to the manner in which a certain fire was handled by Chief Landrey.

St. Augustine, Fla., to Purchase Pumper—St. Augustine, Fla., will purchase a 1,000-gallon pumper. The move has been authorized by the commissioners.

Lunatic Escapes in Fire Apparatus

Although fire apparatus has often been considered an accessory for joy-rides, it remained for an inmate of the State Hospital for the Insane at Norwich, Conn., to combine business with pleasure.

The madman was tired of the life within the institution. He longed for adventures in the great open spaces beyond, the sight of his home village, and for freedom. Without any show of bashfulness, he took possession of the asylum's pumper and made a dash for the unrestrained life.

Clad only in his pajamas and with a white veil flowing from his head, he dashed down the road at a sixty-five mile rate. He mowed through a flock of hens that were just then crossing the road.

State policemen tried to catch up with him. The speed of the pumper was too much for the cars of the state constabulary. They commandeered a high powered vehicle and continued the chase. As the lunatic was roaring up a hill, one of the police overtook him, leaped on the back of the pumper, and stopped the truck. Troopers stated that it was a miracle that no one was killed.

As the madman rushed through his home village he shouted to friends whom he saw:

"Gee whiz! See my new fire engine—and it belongs to the State of Connecticut."

Fireboat Rescues Ferryboat Adrift

The New York City fireboat, George B. McClellan, saved a ferryboat from possible destruction when the boat's steering apparatus failed to function.

The ferryboat Murray Hulbert left its dock in the evening carrying fifty passengers. It was a rainy and foggy night. Whistles were blowing as warning signals to other craft. About mid-stream, the rudder quadrant broke and ferryboat drifted out of control towards a submerged wreck and sharp rocks The captain sounded his distress signal and the fireboat went to its aid.

A line was made fast to the ferry, and the boat towed safely to its port.

Great Crowds Attracted by New York City Fire

Police reserves in New York City had a difficult task when they tried to hold back the large crowds attracted by fire in the Jackson Buidling, East 17th street through to East 18th street. A large, heavy cloud of black smoke hovered over Broadway as firemen directed their streams against the burning building

OF INTEREST TO VOLUNTEER FIRE DEPARTMENTS

HOW TO ESTIMATE APPROXIMATE COST OF OUTSIDE FIRE ALARM

Amount Necessary for Outside Wire Plant of Municipal Fire Alarm System — Labor Costs for Aerial Work — Materials for Pole Lines*

WHERE an outside wiring system is necessary, it is first important to decide on the location of the fire alarm boxes. To do this, obtain a map of the village and spot the locations of the boxes, keeping in mind the following regulation which is a part of extensive rules issued by the National Fire Protection Association:

"Boxes shall be located so as to suitably protect the city or town. In general, it is considered that a box should be plainly visible from the main entrance of any building in congested districts. In mercantile or manufacturing districts it should not be necessary to travel more than one block, nor more than three hundred feet to reach a box; in closely built-up residential districts this distance should not exceed one block or five hundred feet; in other residential districts, this distance should not exceed three blocks or more than one thousand feet along or toward the main artery of travel."

Survey for Pole Lines

In all probability, minor changes will have to be made in the preliminary layout of the boxes. There may be no poles in the neighborhood or no practical way to reach the box location. It is most important that pole locations and numbers be recorded. This simplifies the preparation of specifications, and affords absolute reference points as to box locations, turning points in the line-wire-run and so forth.

The total number of pole line sections in the plant having been determined, the required length of No. 10 B & S triple braid weatherproof hard drawn solid copper wire is readily established, since the average length of a pole line section is 120 feet, allowing for sag, wire ties and so forth.

The quantity of hardware fittings and so forth may be established from the following list which is necessary for each pole.

One cross arm; two 1¼ x ¼ x 28-inch galvanized cross arm braces; two 1¼ x 8-inch locust or oak pins (locust pins are better); two No. 19 Hemingway glass insulators; two 1½-inch round galvanized washers; two 2 x 2 x ⅛-inch square galvanized washers; two 5/16 x 4½-inch galvanized carriage bolts; one ½ x 16/18 or 20/22-inch machine bolts and nuts (length depending upon thickness of pole).

Position of Wires

The next step is to ascertain the requirements of the owners of the pole line as to the positions they will assign for fire alarm wires. One company may require the attachment on the first "gain" below the secondary distributing wires; another, at least four feet distant; another requires fire alarm wires below other signal wires and still another will have fire alarm wires at no other place than directly above the other signal wires, that is, telegraph and telephone wires.

Climbing Space Necessary

It is also necessary to establish the "climbing space" permitted by the owners of the pole line. Some owners permit a climbing space of twenty inches. Others keep to the standard of thirty inches. One large power company in the East requires even forty inches. This is very important since the climbing space establishes the size of the cross arm. Forty inch spacing would mean a special cross arm with corresponding increase in cost.

It is of much importance that these points be settled before starting installations so as to avoid costly rearrangements of wire plant.

Law of Pole Line Permits

In connection with the pole line work, it has been definitely established in the courts that a public service company using the highways as mounting space for its pole structures must permit a municipal corporation to attach its fire alarm and police signal wires without cost. This point of law has been further established to mean that one cross arm or one duct space in an underground subway complies with the requirement. Usually, a municipality, in order to obtain the pole line permits, must enter into an agreement with the public service company issuing such permits, releasing the public service company from all damages arising from the presence of the municipal property on its poles and from any suit for personal damages arising out of injury to a municipal employee while on the pole line or in an underground manhole, and so forth.

If there are any crossings over the right of way of a steam or electric railway, the permission of the owner must be secured, and may be generally obtained through the office of the Engineer-in-Charge, of Maintenance-of-Way. Clearance of the wires will average between thirty to thirty-five feet measured to the top of the rail. For mechanical strength, the wires should be increased to No. 8 B & S at railroad crossings, especially if the span exceeds one hundred feet.

Costs for Aerial Work

A fair average cost for cross arms made ready by the ground-man and placed in position by the lineman is two dollars an arm. The cost of pulling wire in place, tying to insulator, including minor tree trimming averages between seventy-five cents to one-dollar a hundred feet. Extensive tree trimming should be treated as special, as it adds to the cost.

These costs are the result of field experience in and around New York and are based on union labor rates prevailing at about the present time.

Loop wires to the box should be No. 14 B & S n. e. c. rubber covered wire. These loop wires must be installed in conduit, and the conduit must be insulated from the ground by means of an insulating joint placed at the fire alarm box. This is of extreme importance otherwise there is much danger of a lineman sustaining injuries—even fatal injury through grounding himself between the wire line and conduit.

* From catalogue of Stanley and Patterson, Inc., New York.

The material required for each box is as follows:

One ½-inch service head with 2-hole porcelain cover; ¼-inch galvanized conduit to reach from wire line to the insulating joint; three 4-inch wood screws and two short nipples cut from ½-inch conduit.

The wood screws and nipples are used to attach the box to the pole, in preference to the old type back board or arm method, both of which required cutting the pole. The nipples are used to space the distance between the box and the pole.

PITTSBURGH LOSSES INCREASED BUT NUMBER OF ALARMS LOWERED

Report for 1927 Shows Two Disastrous Fires Jumped the Fire Total—Thirty Pieces of Fire Apparatus Installed—Four Firemen Killed

By WILLIAM E. PATTERSON

DURING the year ending December 31st, 1927, the Pittsburgh, Pa., fire department answered a total of 3,537 alarms of fire, a decrease of 398 alarms from 1926. Of the total number of alarms answered, 1,663 were first or bell alarms, 23 second alarms, 11 third alarms, 5 fourth alarms, 14 special alarms for extra fire companies and apparatus and 1,821 still alarms, while 486 of the total number answered were false. The total number of fires for the year was 2,998, a decrease of 417 from the year 1926.

Chief R. L. Smith

December was the busiest month with a total of 398 alarms, while August was the smallest month with a total of 223 alarms.

The fire loss for the year totaled $2,276,039, an increase of $127,588, the largest loss that Pittsburgh has had for a number of years. The increased loss resulted from one fire in the downtown business district that caused a loss of over $1,000,000.

The largest monthly loss was October, which totaled $1,234,424. November was the smallest month with a total loss of $49,511.

Only two disastrous fires entailing heavy loss to property took place in the city during the year, the first one on April 17th (Easter Sunday morning), when fire swept through the top floors of an eight story brick and stone mine and mill supply warehouse extending through the block from First to Second avenues between Wood and Smithfield streets, causing a loss of $143,882. The other was on Penn avenue between Garrison Alley and Tenth street and swept through two six story brick buildings occupied by dealers in radios, women's wearing apparel and furniture, and extended to an eight story brick building occupied by a wholesale drygood warehouse. This caused a $1,163,372 loss, the death of two firemen and the injury of several others under falling walls.

During the year thirty new pieces of American La France motor fire apparatus were purchased and placed into service at a cost of over $337,000.

Two new fire companies were organized and placed into service during the year. Emergency Squad Company No. 1 was placed into commission on April 16th. It answered a four alarm fire eighteen hours after being placed into commission.

Truck Company No. 10 was organized and placed into service in the same quarters with Engine Company No. 10 on South Main street near Mill street in the west end section of the city. This district was heretofore without the services of a ladder company on first alarms.

During the year each of the twenty-one ladder trucks in the department were equipped with eight salvage covers as part of their permanent equipment. Salvage work, in the future, will be part of the duty of ladder companies at fires.

A number of the combination hose and chemical wagons and pumpers located in the suburban or residential districts were also equipped with one or two salvage covers.

Inspections of buildings by the uniformed fire fighting force resulted in a total of 14,093 inspections. Of the total number of inspections made, 10,229 were what is termed regular inspections, where conditions were found to be good, while 3,864 inspections were classed as hazardous.

With the purchase of nearly $18,000 worth of small equipment consisting of all kinds of fire fighting tools and appliances, each and every apparatus in the department was provided with standard equipment of tools and appliances. Among this equipment added to the department were fifty 2½ gallon, fire department type Foamite-Childs extinguishers, eight oxygen breathing apparatus (30 minute type), seventeen Burrell All Service Masks, seventy approved fire department type smoke masks, one inhalator of the latest type, thirty-six fire department claw tools (Pittsburgh type), sixteen Peerless hose clamps, twenty Morrissey life belts with hooks, fifty Grether hand electric searchlights, thirty rope reels, and sundry equipment.

During the year seven firemen died, four of whom were killed in the discharge of their duty. Two were killed by falling walls at the largest fire that took place during the year and two when a triple gasoline pumper was wrecked as a result of the apparatus running into an open ditch at night which was without a danger light. In addition to the deaths among the regular men, sixteen retired pensioners passed away during the year; four resigned from the service, and eight retired on pensions after twenty years or more service.

Drop-Bottle Extinguisher Fails in Tests

Tests made at the Everett Testing Laboratory and sales tests made in Pennsylvania, show that the hand grenade or drop-bottle type of extinguishers filled with carbon tetrachloride are unsuitable for fire protection.

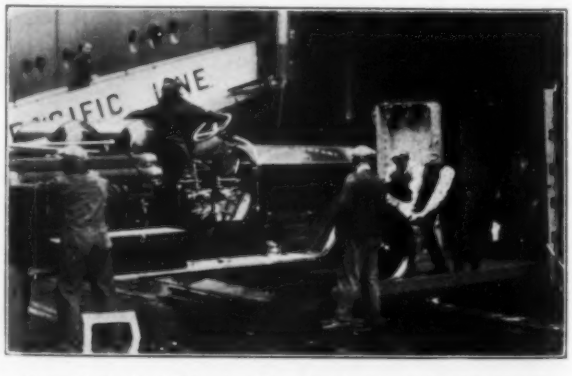
At the test made by the Factory Mutual laboratories, an extinguisher was mounted five feet above a pan one square feet in area, filled with gasoline. The extinguisher dropped after the fire was burning for about one minute. Only the tip of the bottel broke. Two extinguishers were then thrown by hand. After some time, the fire was found to be out, but upon inspection it was found that the fire had burned itself out.

A sales test was made in Scranton, Pa. At this test, a brick garage fifteen by sixteen feet in area and nine feet high was used. Much of the combustible material was taken from the garage, and every effort made to make the test room air tight A pan containing combustible fluid was placed in the center of the concrete floor. Three extinguishers were hung from various parts. All three were seen to have fallen on the concrete floor and to have broken.

After about one-half an hour, with smoke coming out in large volumes so that it was impossible to see how the extinguisher was operating, the door was opened and the fire was found to be out. The pan was dry and evidence indicated that the fire had burnt itself out.

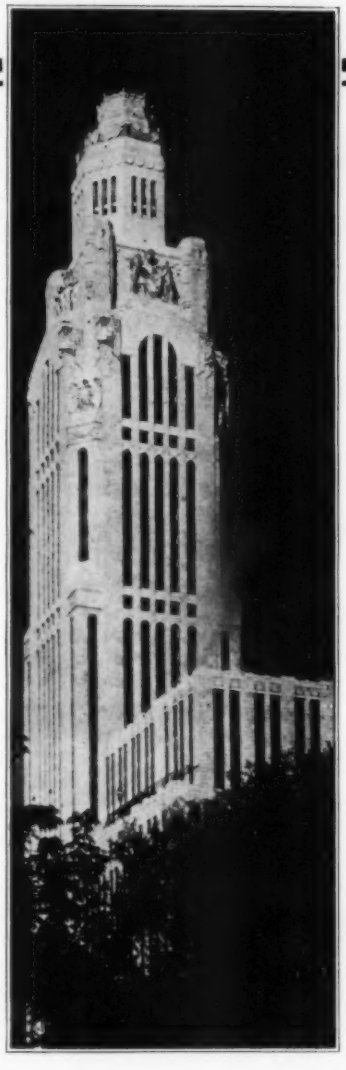
The manufacturer of this device has not submitted the extinguisher to the Bureau of Standards or the Underwriters' Laboratories for extensive tests thus far.

Portland, Ore., to Purchase Apparatus—Portland, Ore., has opened bids for the purchase of five pieces of fire apparatus. The fire alarm system will be extended.



New Method of Shipping Fire Apparatus to Pacific Coast

Manufacturers of fire apparatus are always interested in new methods to reduce transportation costs. The photograph shows fire apparatus being unloaded at Los Angeles, Cal., from the new Panama Pacific liner "California" for the Los Angeles Fire Department. This boat has a capacity for 140 cars and is said to have the largest sea-going garage of any vessel afloat.



A Test That Proved Trustworthiness

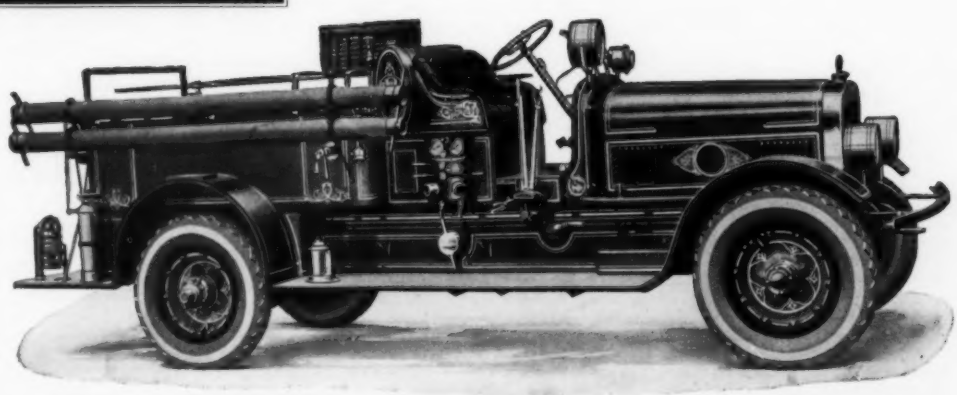
Seagrave apparatus is known for its long life and endurance, but here is a photographic record of an actual test made with a seven-year-old Seagrave Pumper.

The test was conducted in Columbus, O.

With the pumper operating at about half throttle, pumping through the standpipe and using one hose line, the firemen were able to throw water from the tower of the A. I. U. Citadel (a height of 555.5 feet) to any point within a radius of a city block.

At a pump pressure of 380 pounds, delivery at the nozzle was 353 gallons a minute.

This test again demonstrates the trustworthiness of Seagrave apparatus. For further information, write for our bulletin descriptive of this achievement.



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Getting a Line to the 30th Floor

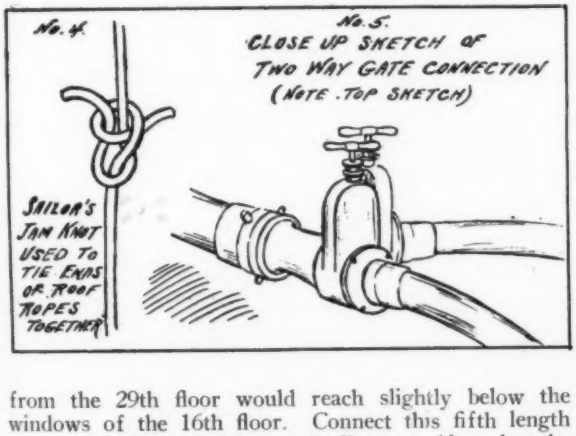
(*Continued from page 320*)

rope to some nearby column or other firm support on the floor and pull taut, allowing the hose above the knot to be free from strain. Now remove the roller from beneath the hose and re-tie, securing on the sill beside the hose. Also secure hose at the 28th floor with ladder strap. Exercise economy in tieing of roof rope to column so that unused rope may be utilized to pull up another three inch line of hose besides that already in place outside the building if conditions warrant it.

Two Lines from 2-way Gate

To the length of three inch hose pulled in on the 29th floor connect a two-way gate with reducer and from each outlet of same (Sketch No. 5) stretch two lines of 2½ in. hose (2 lengths in each line) equipped with 1⅛ in. controlling nozzles. Stretch one line to the 30th floor (fire floor) via interior stairway or both lines if required (Sketch No. 1).

Members of the third and fourth companies on the 16th floor to work similar to companies on the 29th floor in regard to manner of hoisting hose, securing same with roof rope, economy in use of rope, resetting hose roller. The end of the fifth length of 3 in. hose hanging down



from the 29th floor would reach slightly below the windows of the 16th floor. Connect this fifth length to the male butt of the second allotment (four lengths of 3 in. hose) just hoisted to the 16th floor.

Line Continuous from 29th Floor to Sidewalk

Pull in enough hose to make connection, and after connection is made, pass out hose so that the line is continuous from the 29th floor to the sidewalk. In securing the end of the roof rope to the hose outside the window on the 16th floor, follow instructions already outlined for the 29th floor, paying particular attention to easing up the strain on the hose line, by placing most of the strain on the roof rope, allowing the hose above the knot to be eased up.

The fireman left below on the 6th floor shall secure the roof rope to the hose at this level in the same manner.

Connect at Street with Pumper or Hydrant

In the meantime, the members of the fifth company in the street shall complete the stretch with two additional lengths of 3 in. hose and connect them to a pumper or to the hydrant of the high pressure system. Use a high pressure gauge at the hydrant in the latter case.

The total weight of the water in this stretch from the sidewalk to the 29th floor would be 1,143 pounds plus the weight of the hose 605 pounds or a total of 1,748 pounds gross. With this weight apportioned to four roof ropes at the levels indicated, viz., 6th, 16th, 20th, (set back) and 29th floors, and all hose connections made up tight, the stretch of hose is quite secure.

Fair Stream Available at 30th Floor

A fair working stream would be available at the 30th floor with the lay-out as described, using either a pumper or the high pressure system. If necessary shut down one of the hand-lines at the 29th floor to build up the pressure on the second line.

Communication between the men at the different levels could be maintained from telephone switchboard on the main floor or in the case of buildings in course of erection, via a pre-arranged code of signalling by flags or lights.

The outside of the building should be used for stretching in lieu of elevator shaft or stair-well as hose rollers can be placed and secured to better advantage and working space to men hoisting is not so restricted. A similar arrangement, however, as to disposition of forces and manner of carrying out the evolution could be followed.

Special Dust Used to Fight Foreign Fires

A chemically prepared dust propelled by gas power has been developed by Hungarian scientists and used with success in Budapest to extinguish fires without the attending water damage.

This fact was brought out at a farewell luncheon given in the Bankers' Club in New York City by Robert H. Mainzer, honorary deputy fire chief, to Dr. Eugene Sipoz, Lord Mayor of Budapest and members of the Hungarian parliament. Fire Commissioner John J. Dorman and Chief John Kenlon attended.

At the luncheon Mr. Mainzer told of the large fire losses in this country and the losses in New York City. He praised the initiative and progressiveness of Kornel Szilvay, chief of Budapest. He said:

"I consider the invention of this powder a large step forward and I sincerely hope that he will be able to have some of these machines built so as to bring it over here and give the New York Fire Department a demonstration."

He further stated that he felt that the fire chiefs throughout the country would be receptive to any idea that would decrease the enormous fire loss each year.

Chief Kenlon while making no direct reference to this invention, stated that one of the reasons why fire losses in America were so high and the European losses so low was because property values in America were much higher. He said European cities were finished while here they were still being built. The chief stated that he had the highest regard for departments abroad, but their tasks were much easier in comparison. Chief Kenlon said:

"In a great republic where we are supposed to have a large measure of freedom, people don't care so much about obeying the law."

The Hungarian delegations were part of those who came over to participate in the Louis Kossuth pilgrimage.

Ex-Chief Packard of Quincy, Mass., Dead

Ex-Chief Frank C. Packard, of the Quincy, Mass., fire department, died on March 18 at his home, 31 Chestnut Street, Quincy, at the age of seventy-five.

He was born in Quincy and years ago was a member of the famous old Washington M. French Hose Company. He served with the Vulture Hand Engine Company and with Engine 1, the first steam fire engine in Quincy. Mr. Packard became a district chief in 1886 and was chief of department in 1898. He was a member of the Fire Chiefs' Club of Massachusetts, of the Ancient and Honorable Artillery Company, and of the Quincy lodges of Masons and Odd Fellows. The funeral was held from his late residence on March 20.

HARRY BELKNAP.

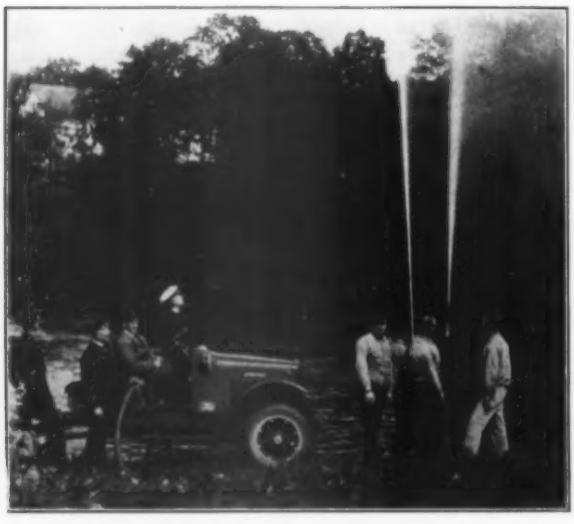
Call Men in Arlington, Mass., to be Abolished—Arlington, Mass., has voted to abolish call men in the fire department and to appoint five more permanent firemen.

Cohasset, Mass., Will Purchase Apparatus—Cohasset, Mass., has voted to purchase new fire apparatus for $5,900 for the Beechwood district of the town.

International Truck Sent to Sweden

The International Harvester Company has delivered a chassis on which is mounted a Hale rotary pump, to Norrkoping, Sweden. The equipment has been designed for small town fire protection.

Apparatus similar to the one delivered to Sweden has successfully passed the twelve hour test of the National Board of Fire Underwriters.



Testing Pumper in Swedish Town

Swedish firemen testing a Hale rotary pump mounted on a 6-cylinder International Harvester chassis.

A similar unit has also been delivered to Mulvane, Kans. Contract requirements were 350 gallons a minute at 120 pounds pressure. During the first six hours of the test, the pump delivered 355 gallons at 125 pounds pressure. The pump operated at 659 r.p.m., and the engine at 1,535 r.p.m.

CONVENTION DATES

April 19—FIRE CHIEF CLUB OF RHODE ISLAND. Regular Meeting, Providence, R. I. Secretary, Chief Thomas V. Daley, Pascoag, R. I.

May 7-10—NATIONAL FIRE PROTECTION ASSOCIATION (International). 32nd Annual Meeting, Atlantic City, N. J. Secretary, Franklin H. Wentworth, 40 Central Street, Boston, Mass.

May 9—SULLIVAN COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, South Fallsburg, N. Y. Secretary, Adolph Doeinck, Liberty, N. Y.

May 10-11—ARIZONA STATE FIREMEN'S ASSOCIATION. 5th Annual Convention, Bisbee, Ariz. Secretary, Chief W. J. Nemeck, Douglas, Ariz.

May 18-19—FOUR-COUNTY FIREMEN'S ASSOCIATION. Annual Convention and Parade, Allentown, Pa. Secretary, P. J. McNally, Catasaqua, Pa.

May 30-31—SOUTH CAROLINA STATE FIREMEN'S ASSOCIATION. 23rd Annual Convention, Rock Hill, S. C. President, Chief Louis Behrens, Charleston, S. C.; Secretary, R. S. Hood, Sumter, S. C.

June 5-7—KENTUCKY STATE FIRE CHIEFS' AND FIREMEN'S ASSOCIATION. 10th Annual Convention, Middlesboro, Ky. Secretary, Captain S. G. Render, Fire Department Instructor, 303 Speed Building, Louisville, Ky.

June 5-7—NEW YORK STATE ASSOCIATION OF FIRE CHIEFS. 22nd Annual Convention, Troy, N. Y. (meeting in conjunction with Mayors' Conference). Secretary, Chief John H. Golden, Cohoes, N. Y.

June 5-7—OHIO FIRE CHIEFS' ASSOCIATION. 11th Annual Convention, Marion, Ohio. Secretary, Chief Philip J. Harty, Fire Department, Youngstown, Ohio, Sheet and Tube Company.

June 8-9—DELAWARE COUNTY FIREMEN'S ASSOCIATION. 22nd Annual Convention and Parade, Chester, Pa. Recording Secretary, Timothy McCary, Chester, Pa.

June 16—LEBANON COUNTY FIREMEN'S ASSOCIATION. Annual Convention, Palmyra, Pa. Secretary, William I. Kutz, Box 233, Myerstown, Pa.

June 19-21—HUDSON VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 39th Annual Convention, Kingston, N. Y. Secretary, Chief Chris W. Noll, Poughkeepsie, N. Y., Fire Department.

June 19-22—ANNUAL SHORT COURSE OF FIRE PREVENTION, CONTROL AND EXTINGUISHMENT. 4th Course, University of Illinois, Champaign-Urbana, Ill. Secretary, Ill. Firemen's Association, Asst. Chief Roy W. Alsip, Champaign, Ill.

June 20—NASSAU COUNTY FIREMEN'S ASSOCIATION. Annual Tournament, Port Washington, N. Y.

June 20-22—WISCONSIN STATE FIREMEN'S ASSOCIATION. 41st Annual Convention and Tournament, Kiel, Wis. Secretary, E. Philip Mueller, Jefferson, Wis.

June 20-23—PROVINCIAL FEDERATION OF ONTARIO FIRE FIGHTERS. Annual Convention, King Edward Hotel, Toronto, Ont., Can. Secretary-Treasurer, David H. Lamb, 132 Bellevue Avenue (2) Toronto.

June 25—NORTHWEST FIREMEN'S ASSOCIATION. Semi-Annual Convention. Centerton, Ark. Secretary-Treasurer, F. M. Brock, Bentonville, Ark.

June 25-28—OKLAHOMA STATE FIREMEN'S ASSOCIATION. 34th Annual Convention and State Firemen's Training School, Blackwell, Okla. Secretary, Charles Slemp, 820 East 19th St., Oklahoma City.

June 26-29—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. 6th Annual Convention, Burlington, Vt. Secretary-Treasurer, Chief John W. O'Hearn, Watertown, Mass. Chairman, Exhibit Committee, Frank M. Tiffany, Gamewell Company, 1022 Commonwealth Avenue, Boston.

June 28-30—ALLEGHANY COUNTY FIREMEN'S ASSOCIATION. Annual Convention, Tarentum, Pa.

July 4-6—DOMINION ASSOCIATION OF FIRE CHIEFS. 20th Annual Convention, Kingston, Ont. Secretary, Chief James Armstrong, Kingston.

July 5-7—SOUTHEASTERN FIRE CHIEFS' ASSOCIATION. Annual Convention, Atlanta, Ga. Secretary, Chief H. E. Whitener, Hickory, N. C.

July 10-12—MICHIGAN STATE FIREMEN'S ASSOCIATION. 54th Annual Convention, Port Huron, Mich. Secretary, H. L. Williams, Ludington, Mich.

July 27-28—NEW MEXICO STATE FIRE CHIEFS' ASSOCIATION. Annual Convention, Socorro, N. M. Secretary, Theodore A. Rosenwald, East Las Vegas, N. M.

August—UTAH STATE FIREMEN'S ASSOCIATION. 21st Annual Convention, Bingham Canyon, Utah. (Date to be set at April meeting.) Secretary, Harris E. Anderson, Fire Headquarters, Salt Lake City, Utah.

Aug. 1-2—CENTRAL DISTRICT VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, Clearfield, Pa. Secretary, John E. Johnson, DuBois, Pa.

Aug. 22-24—VIRGINIA STATE FIREMEN'S ASSOCIATION. 42nd Annual Convention, Ocean View, Va. Secretary, Chief J. B. Gordon, Newport News, Va.

Aug. 29-31—CALIFORNIA STATE FIREMEN'S ASSOCIATION. 6th Annual Convention. Redding, Cal. Secretary-Treasurer, H. E. Strasser, 1171 Tenth Street, San Diego, Cal.

Sept. 11-13—ILLINOIS FIREMEN'S ASSOCIATION. 41st Annual Convention, LaSalle, Ill. Secretary, Roy W. Alsip, Asst. Chief, Fire Department, Champaign, Ill.

Sept. 18-19—IOWA FIREMEN'S ASSOCIATION. 51st Annual Convention, Independence, Ia. Secretary, E. E. Parsons, Marion, Ia.

Oct. 1-5—PENNSYLVANIA STATE FIREMEN'S ASSOCIATION. 49th Annual Convention, Uniontown, Pa. Secretary, Charles F. Clark, 411 Bellevue Avenue, Wayne, Pa.

Oct. 1-6—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. 35th Annual Convention and School of Instruction for Firemen, Sacramento, Cal. Secretary, State Fire Marshal Jay C. Stevens, Merchants' Exchange, Bldg., San Francisco, Cal.

Oct. 9-10—MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. Annual Convention (tentative date). Secretary, Chief Ray Tiller, Waterloo, Ia.

Oct. 9-11—RAILWAY FIRE PROTECTION ASSOCIATION. Annual meeting, place to be selected later by Executive Committee. Secretary-Treasurer, R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md.

Oct. 11-12—GREAT LAKES ASSOCIATION OF FIRE CHIEFS. Annual Convention (tentative date). Secretary, Chief Frank C. McAuliffe, Chief of Patrols, 100 S. Desplaines St., Chicago, Ill.

Oct. 15-17—EASTERN ASSOCIATION OF FIRE CHIEFS (Eastern Division, I. A. F. C.). First Annual Convention, Bellevue-Stratford Hotel, Philadelphia, Pa. (Just preceding I. A. F. C. Convention.) Secretary, Chief J. H. Golden, Cohoes, N. Y.

Oct. 17-20—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 55th Annual Convention, Bellevue-Stratford Hotel, Philadelphia, Pa. Exhibits at Second Regiment Armory. Secretary, Chief James J. Mulcahey, Yonkers, N. Y.; Executive Secretary, Jay W. Stevens, Merchants' Exchange Bldg., San Francisco, Cal.; Chairman, Exhibits, Chief August Gerstung, Elizabeth, N. J.

Oct. 22-24—KANSAS STATE FIRE CHIEFS and FIREMEN'S ASSOCIATIONS and WOMEN'S AUXILIARY. 13th and 42nd Annual Conventions and 3d Meeting, respectively, Liberal, Kan. Secretary, Chief K. D. Doyle, Wamego, Kan.

Apparatus Damaged in Homestead, Pa.—An officer and a fireman of a fire company in Homestead, Pa., were badly injured when a truck crashed into the apparatus while it was responding to a fire.

New Apparatus Delivered to Watsonville, Cal.

A 1,000-gallon pumper and a city service truck, both of the Seagrave make, have been delivered to Watsonville, Cal. This community of nine thousand persons has in addition, a 300-gallon Obenchain Boyer pumper and a 750-gallon Seagrave pumper.

Mack

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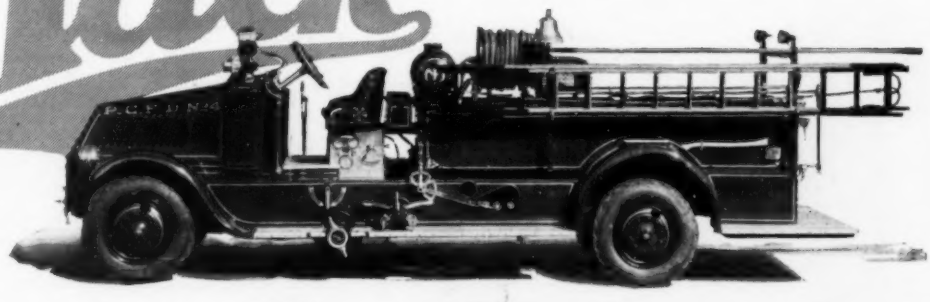

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PONCA CITY, Oklahoma, has discovered like many other progressive communities that where only a few pieces of fire apparatus can be maintained, quality equipment, if possible, is even more important than in great cities where massive buildings present constant fire hazards. Ponca City's latest purchase is the triple combination 750-gallon pumper pictured above. The complete line of MACK fire apparatus includes motors of either 4 or 6 cylinders, with pump capacities ranging from 350 to 1300 gallons per minute.

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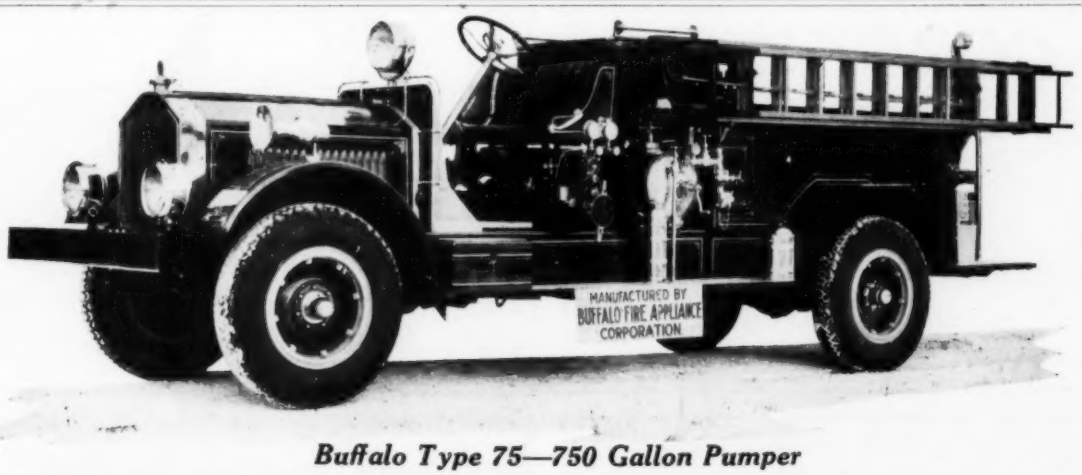

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Jersey City Cars Have Safety Glass

Since Deputy Chief Patrick Cooney of Jersey City, N. J., was severely cut by flying glass when thrown against the windshield of his automobile in a recent accident, five chiefs' cars in that city have had their cars equipped with Triplix glass. This step was taken to prevent the repetition of such an incident.

This glass does not shatter under impact and is therefore applicable for fire department use. The glass is manufactured in Hoboken and a new factory has been established in Passaic, N. J.

Two Firemen Injured When Hose Bursts

One fireman received a broken nose, a deep gash over one eye and lost two teeth, and another fireman broke his thumb when a hose line burst and went wild at a fire in Anderson, S. C.

The fire did $1,000 damage and partially destroyed a two-story house occupied by four families.

The men were thrown down a flight of stairs when the hose gave way. They were rushed to the hospital where their injuries were dressed. Eight stitches were necessary to close the gash over the eye. Only one of the three men working at the nozzle escaped uninjured.

Fire Failure of Cast Iron Column

(*Continued from page 328*)

The collapse was due to the failure of two of the basement columns. These columns were fourteen inches in diameter with an overall length of ten feet, six inches, the metal being one inch in thickness. They were the third and fourth columns from the Mercer Street end of the building and were located in the packing and shipping room where the fire originated.

Examination of the broken columns show their failure was caused directly by the heat. Although the thickness of the metal of columns varied slightly and there were several sand holes in the metal, they were normal castings and the foregoing features did not enter into the cause of their failure. Both columns failed at a point a short distance below the basement ceiling or approximately three feet from their upper end. The third column was located at about the hottest point of the fire and appears to have been the first to collapse. This column was badly broken and fragments of it clearly indicated that the heat was so intense that it practically reached the fuseing point of the metal. The failure of both of the columns is complete. The top portion of Column 3, on which were the ear lugs and brackets, was broken into several pieces along a vertical line about three feet in length, while the lower portion, which shows a diagonal shear, is approximately five feet in length. Column 4 is broken similar to Column 3, except the top portion is not so badly shattered. The upper central sections of both columns, or the portions exposed to the greatest heat, were broken into numerous smaller pieces. The brackets of the second column from the Mercer Street end of the building, upon which the two first floor beams supported by this column rested, were broken off, but otherwise this column was undamaged. These brackets appear to have been broken by the collapse and were not a factor in causing it.

Results of Fire

The damage consists of the complete destruction of that portion of the building involved in the collapse, as well as the stock in that portion. The balance of the stock, also the furniture and fixtures throughout the building, were partially damaged by smoke and water as well as by the dust and dirt caused by the collapse. The damage to the contents of the building was such that it was all subsequently sold at public auction by the Underwriters Salvage Company. The building is now vacant and workmen are engaged in removing the tangled mass of debris, which is so tightly packed that the task is a difficult one.

The building was insured for $460,000 on which there is an estimated loss of $130,000. The stock was insured for $85,000 on which there is an estimated loss of $63,700. Furniture and fixtures were insured for $66,000 and the estimated loss amounts to $33,000. The insured also carried $8,500 insurance on profits, which is a total loss.

Conclusions

The portion of building that collapsed was caused by the failure of two columns. These columns were located in the basement and their failure removed the only support of two vertical rows of columns extending eight floors above and caused that portion of the building depending upon them for support, to collapse.

The fire was of small proportions and ordinarily should have caused only a moderate amount of damage. However, it developed sufficient heat to cause the failure of the two basement columns with the resultant collapse and excessive loss. It is evident that cast iron columns should not be used in tall buildings, as their failure is usually complete and results in sudden and total collapse of the sections supported. Girders and beams cannot be rigidly attached to such columns and defects in the material cannot be easily detected. In contradistinction the failure of steel columns is gradual and does not often result in the total collapse of the sections supported. This has been clearly demonstrated in numerous instances where serious deflection of steel columns did not result in the total collapse of floors above.

Unprotected cast iron columns will not sustain an appreciable load for any length of time when they are exposed to comparatively high temperatures. Proper protection on such columns, however, materially increases the length of time that the columns will stand without failing and it is evident that all structural members of fire resistive buildings be protected by a sufficient mass of fire-proofing to thoroughly insulate them against the heat that may be developed by the rapid burning of the combustible materials in any story of such buildings. It is also essential that all fireproofing be firmly anchored or otherwise securely held in position where it is of such a nature or so designed that it may become loose as a result of heat. On account of their great importance structurally, columns should be insulated by at least two inches of fireproofing material.

The proper construction and protection of vertical shafts is also essential not only to prevent the spread of the fire from floor to floor, but also to prevent such shafts acting as large flues thereby increasing the intensity of the fire. All stairs and elevators should be enclosed in shafts affording protection equal to at least six inches of hollow tile, covered by ¾-inch cement plaster, and the openings protected by doors of equivalent value of the shaft.

The failure of the automatic fire alarm system just prior to the fire was unfortunate, as early discovery of the fire might have permitted the fire department to extinguish it in its incipiency and prevented the large loss incurred by the collapse. This failure, however, does not discredit the value of fire alarm systems or minimize the necessity of installing such alarm systems in buildings where a fire may burn undetected for any considerable period of time.

Perhaps the chief point of interest in this fire besides emphasizing again the unreliability of unprotected cast iron columns, is the danger to the fire fighting forces from probable collapse of the buildings in case of fire where such structural supports are employed. It would be highly desirable that cast iron columns in existing buildings, more especially of the fire resistive type, be insulated with approved fire protecting coverings.

Deputy Chief Downey Elected Honorary Member—Deputy Chief Thomas H. Downey of the Boston Fire Department was elected an honorary member of the Box 52 Association of Boston, Mass.

Storage Fire in South Africa Affects Supply to Cape Colony

Damage amounting to £500,000 ($2,440,000) resulted from a huge fire in the Imperial Cold Storage in Cape Province, South Africa. This was the largest fire that the district had for the past thirty years and it has seriously affected the food supply for the Cape Colony.

PROPOSED IMPROVEMENTS

Seymour, Outagamie Co., Wis.—City purchased a Waterous triple combination car for the fire department, at $5,500.

Greens Farms, Fairfield Co., Conn.—Plans are under way for erection of a new fire station.

Bridgeville, Allegheny Co., Penn.—Board of Underwriters recommended the purchase of a motorized pumper with capacity of 600 gallons.

Slippery Rock, Butler Co., Penn.—Petition being circulated for the purchase of a new piece of fire apparatus. George E. Heineman, Chief of Fire Department.

Bound Brook, Somerset Co., N. J.—Borough Council passed ordinance calling for the purchase of a 600 gallon capacity triple-combination car not to exceed $12,000. H. C. Stolz, Chief of Fire Dept.

Grove City, Mercer Co., Penn.—Volunteer fire department presented petition to Borough Council requesting purchase of additional equipment.

Bluefield, Mercer Co., W. Va.—City Council voted to raise funds for purchase of equipment for the fire department.

Sherwood, Branch Co., Mich.—Sherwood township voted in favor of the purchase of a new piece of fire apparatus.

Chili, Monroe Co., N. Y.—Towns of Chili, Ogden, Riga and Gates petitioned Monroe County Board of Supervisors asking that a fire district be established at North Chili.

Bridgeville, Allegheny Co., Penn.—Fire department organized here with Charles Fatkins as chief.

Mellette, Spink Co., S. Dak.—Contemplating purchase of new piece of fire apparatus. Harold Martin, Chief of Fire Dept.

Conroe, Montgomery Co., Tex.—City Council considering erection of new fire station, according to reports.

Suffolk, Nansemond Co., Va.—Plans for proposed new fire station being made. Estimated cost $40,000.

Branchville, Southampton Co., Va.—Fire department raising funds for purchase of new apparatus and equipment, according to reports.

Classifying and Controlling the Firebug

(*Continued from page 322*)

but the courts, judges, and law makers are the only ones who can deal with the fire criminal. Legislation must be introduced so that fire criminals can be punished without so much loss of time, and discarding of evidence. A county or district court with a fire judge, and fire prosecuting attorney could be the solution, to handle all fire cases, and nothing else.

Control and Punishment of Fire Criminals

Arsonists who deliberately plan felonies, are in the majority, and should be treated as criminals and sentenced to not more than 10 years, at hard labor. Should human life be lost due to this cause, it should stand as manslaughter, and the sentence be not less than 14 years.

Incendiaries who do their work from spite, or to terrorize, or for revenge, are dangerous and the terms should be 1 to 10 years. Should human life be lost due to this cause, the term should be not less than 25 years.

Excitement pyromaniacs could be sent to a detention home where a wholesome interest could be developed in other lines of interest, so that such cravings could have outlets in other endeavors.

Pyromania dementia praecox victims can never be entirely cured any more than any other mental sickness. They should have a separate institution for their confinement, as they are dangerous, and cannot very well be placed with other types of insanity patients.

Both types of pyromaniacs should have neurological and psychopathic treatment, and that can be given only through confinement and segregation. That is the only practical solution of this problem.

Waterville, N. Y., to Purchase Apparatus—Waterville, N. Y., will purchase a 500-gallon pumper. Bonds will be issued to finance the purchase.

Lancaster County Firemen Dine—Four hundred firemen attended the fourth annual banquet of the Lancaster County, Pa., Firemen's Association in Lancaster. Firemen from principal departments in the county attended.

Catalogue Issued on Fire Alarm Apparatus

A catalogue containing a fund of useful data on fire alarm apparatus has just been published by Stanley and Patterson, Inc., 150 Varwick Street, New York, N. Y. It is known as Catalog No. 47.

It contains detailed technical data and illustrations on various systems in use by towns and municipalities. There is very little literature available at present on fire alarm systems, and therefore this catalogue, containing as it does, a large amount of practical information, will be found of particular interest to fire department officials in towns and cities.

New York Firemen Liable for Accidents

Governor Smith vetoed a measure that would bring relief to drivers of fire apparatus in New York State and which would have made the city liable for accidents while on the way to a fire.

At the present time, if fire apparatus meets with an accident such as crashing into a building or into a car, the driver of the apparatus is held personally liable.

Representatives of the firemen said, "We want protection so that if we have an accident, while driving city-owned cars, our homes will not be taken away from us.

Governor Smith said, "I appreciate your viewpoint but you know that firemen in responding to the call, must necessarily break all sorts of laws and regulations in order to get to the fire. You must bear in mind that the functions of the fire and police departments are purely state functions which have simply been turned over to the cities as a matter of convenience. The remedy of a driver of fire apparatus against whom there is a judgment is found in the Court of Claims."

Two other attempts to make municipalities liable for accidents occurred while driving fire apparatus on the way to a fire, have met similar fates.

Fire Apparatus Exhibit to be Held in Italy

An exhibition of machinery and implements for preventing and extinguishing fire will be held in Turin, Italy, this year.

There will be a special booth at the exhibition which will contain all publications, books and printed matter on fire prevention. The committee in charge of this department desire authors of such works to submit copies for the display. Prizes and diplomas will be awarded.

Statement of Ownership

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, of FIRE ENGINEERING, published bi-weekly at Albany, New York, for April 1, 1928.

State of New York, County of New York, ss.:

Before me, a Notary Public in and for the state and county aforesaid, personally appeared I. H. Case, who, having been duly sworn according to law, deposes and says that he is the General Manager of FIRE ENGINEERING and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of Congress of August 24, 1912, embodied in section 443, Postal Laws and Regulations, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and general manager are:

Publisher, Case-Shepperd-Mann Publishing Corporation, 225 West 34th Street, New York City.

Editor—Robert H. Lockwood, 225 W. 34th Street, New York City.

Managing Editor—Frederick Shepperd, 225 W. 34th Street, New York City.

General Manager—I. H. Case, 225 W. 34th Street, New York City.

2. That the owners are:

Case-Shepperd-Mann Publishing Corporation, 225 W. 34th Street, New York City.

I. H. Case, 225 W. 34th Street, New York City.

Frederick Shepperd, 225 W. 34th Street, New York City.

K. M. Mann, 225 W. 34th Street, New York City.

R. H. Lockwood, 225 W. 34th Street, New York City.

3. That the known bondholders, mortgagees, and other security holders, owning or holding 1 per cent, or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him,

I. H. CASE,
General Manager.

Sworn to and subscribed before me this 30th day of March, 1928.

(Seal) GODFREY L. TRAUTMAN.

(My commission expires March 30, 1929)

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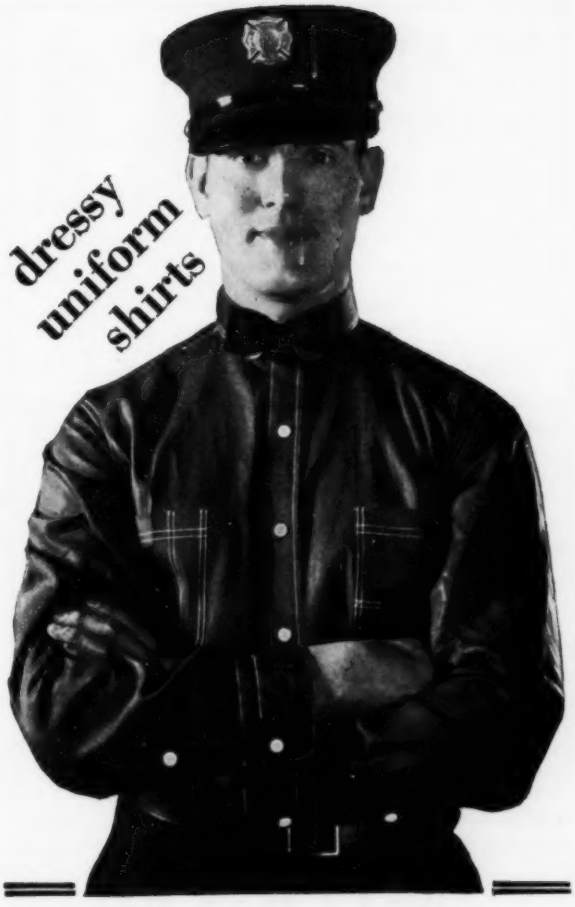

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are in use throughout the country and giving unsurpassed service.

Every fire official should be fully acquainted with Morse equipment and have our catalog and other descriptive literature on file for ready reference whenever considering the purchase of new equipment.

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LONGER effective life, higher efficiency and greater freedom from trouble may be had by using Hale Dreadnaught Fire Pumps.

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D. A. Woodhouse, Pres. and Gen. Mgr. George J. Kuss, Vice Pres. and Treas.

FALSE ALARMS

NO WONDER

It was the monthly smoker and entertainment of George Washington Fire Company. All the men were there and were having a good time. "I sat down on the piano stool with great display," said the musician when telling some friends next day of the affair,—"and they laughed when I sat down."

"Didn't they know you could play," asked a friend.

"Oh yes. But there was a tack on the stool."

Fool the Chicago gunmen. Kill yourself.

DULY QUALIFIED

Mike applied for the position as inspector in Places of Public Assembly. There was a vacancy when one of the boys left the service to try his hand at selling fire apparatus.

The chief looked the applicant over. He said:

"Mike I think you are just a little too ambitious. This position requires a diplomat. If you can prove to me that you are a diplomat the position is yours."

Mike thought for a moment and then said with a smile:

"Chief I've been married for twenty years and my wife still thinks that I have a sick friend."

PRIVATE BUSINESS

The madam of a house who prided herself on the strictly methodical way in which all routine matters were considered, was surprised one morning to see the maid rush in excitedly. The madam scowled, but that did not frighten the servant.

"Madam, the house is on fire."

"Do control yourself, Jane. We don't want the neighbors to know our private affairs."

BROTHERLY LOVE

European fire departments are conducted on a military plan. The men have to line up in the morning for inspection on the parade grounds, and inventoried as to personal attire.

The lieutenant was impressing the rookie with the way that one fireman must cooperate with another. The good name of the fire department was very important. After talking in this strain for a while he said:

"For example, what would you do if your friend had his breakfast on the table, his buttons on the uniform were not cleaned, and the bugle blew for morning inspection?"

The rookie thought for a while and then said, "I should eat his breakfast for him while he was cleaning his buttons."

PURE ARITHMETIC

Jenkins was attending a course to prepare him for the coming promotional examination for lieutenant. He was a fireman possessed with more than the average ambition. His instructor took exceptional pride in him, and often called on him to illustrate problems at the blackboard.

The hour was getting late—that is the instructor thought the class in hydraulics should have ended long ago, but his watch had stopped. The men were hard at work on a problem.

"What time is it, Jenkins?" he asked.

"Nine twenty-one."

"Fine," replied the instructor absentmindedly, "now suppose, Mr. Jenkins, that you work it out for me."

A HANDICAP

Even being a fire captain has its handicaps. In one city a captain would shout his orders to men working on the upper floors. In this way he acquired a deep, sonorous voice. In fire department work it was an asset.

However, when he took his wife to the theatre, he found out otherwise. As he was explaining something to her, a man tapped him on the shoulder.

"It's impossible to hear a word in back of you."

"Well, what business is it of yours what I say to my wife?" the captain replied.

A FAIR EXCHANGE

Mike was assigned to theatre detail for a month. In this way he acquired more than a passing acquaintance with the ticket seller and the other officials of the theatre.

"Look here, Mike," a friend said one day, "now that you're at the theatre you ought to be able to send a guy some passes. How about it?"

"That's a mighty fine idea," said Mike. "Now that you're a watchman in the bank, why don't you send a friend some of those bills."

"Were you embarrassed when the Hawaiian costume that you wore at the night club party caught on fire?"

"Oh, no indeed, sir. They soon put me out."

NOT A CHANCE

Springdale was a thriving community. The doctor who had been serving as fire department physician for the city fathers was too busy to devote time to the work. A new doctor who had just moved in town was given the post made vacant.

A few days after he was thus honored, a fireman appeared, suffering from a heavy cold. The fireman had been out two nights previous fighting a fire, and had become ill. The fireman was somewhat skeptical of the new physician.

"Are you sure that I have bronchitis, doctor? I have heard that sometimes doctors diagnose cases wrong. I was told of one man who was said to have had pneumonia, and who later died of typhoid fever."

"You're wrong," said the young doctor. "If I treat a man for pneumonia he dies from pneumonia."

PERFECTLY CONTENT

Harry was one of those fire-fighters who believed that the fire department depended on him and on him alone. He was also one of those firemen who are reckless enough to report for duty with a "hangover" from the night previous.

The chief decided that he had had enough of such conduct. He said:

"I believe it's about time that you left the department."

"Now look here chief, I want to tell you one thing. If I leave, you'll have a hard time to get another one like me."

The chief smiled.

"Well that's one consolation."

SHIFTING THE BLAME

The four-county organization held their monthly meeting in the town hall. Firemen from the immediate vicinity came in their cars, and many brought friends who didn't have their own means of transportation. A number of the cars carried other liquid beside gasoline and oil.

On the way home, this particular roadster meandered down the road.

"Bill," said Henry, "I wancha to be very careful. Firs' thing y' know you'll have me in a ditch."

"Me?" questioned Bill with great surprise, "Why I thought you was drivin.'"

WENT ASTRAY

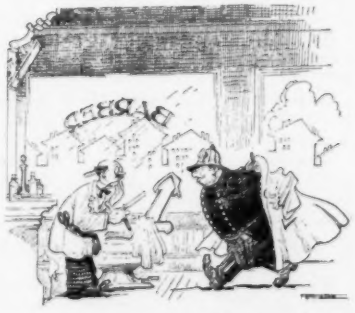
The dinner dishes were put away, the children had gone out and the parents seated themselves in the easy chairs in the living room to peruse the newspaper.

A fireman is always interested in firemanic matters and it was therefore natural that he should spy a fire story the first thing. He commenced reading aloud a story of a fire in a New Jersey Coast summer resort.

"Embers were carried to the residential section—"

His wife interrupted the reading with the exclamation, "Fools! Why didn't they carry them down to the beach."

A fire department officer is known by the company that he keeps waiting.



Courtesy, Colliers

Village Chief: A quick shave, Joe—just once over, I'm on my way to a fire.

FIRE DEPARTMENT ACTIVITIES

Gilmore, Ia., Has New Fire Alarm—A remote control fire alarm system has been installed in Gilmore, Ia.

Funds Being Raised in Waynesboro, Pa.—Funds are being raised in Waynesboro, Pa., for the purchase of fire apparatus.

W. Pittston, Pa., Wants Ladder Truck—There is local agitation for the purchase of a ladder truck in West Pittston, Pa.

Elkhorn, Wis., Has New Fire Apparatus—A Pirsch pumper has been delivered to Elkhorn, Wis.

Rockford, Ill., Plans Fire Station—Rockford, Ill., has opened bids for the erection of a new fire station.

Haworth, N. J., to Erect New Fire House—Contract has been let in Haworth, N. J., for the erection of a new fire station.

Chief of Turtle Creek, Pa., Injured—Chief Kenyon of Turtle Creek, Pa., was injured when he touched a live electric wire while fighting a fire.

Sewickley, Pa., to Have New Station—A combined fire and police station will be erected in Sewickley, Pa. Revised plans for the project are being drawn.

Walton, N. Y., to Erect Fire Station—Bids have been received for the erection of a fire station in Walton, N. Y., estimated to cost $30,000.

Matawan, N. J., Owns Fire Department—With the passage of an ordinance in Matawan, N. J., appropriating $15,000, the borough has secured complete control of the fire department.

Riverton, N. J., Erecting Fire Station—A fire station is being erected in Riverton, N. J., upon the site of the old building. The new structure will be of fireproof construction.

Denton, Md., Receives Apparatus—A Seagrave suburbanite has been delivered to Denton, Md. This small pumper can deliver 400 g.p.m.

Gallitzin, Pa., Postpones Building—Due to present financial conditions, erection of a new fire station for Gallitzin, Pa., will be postponed to some indefinite date.

Louisville, Ky., Has Received New Apparatus—Two pumpers and a squad wagon, purchased last summer, have been delivered to Louisville, Ky.

Mankato, Minn., to Receive Equipment—Mankato, Minn., is expecting delivery of a triple combination pumper that was purchased for $12,000.

Apparatus Purchased by Seymour, Wis.—The council of Seymour, Wis., has purchased a triple combination pumper for $5,500.

Violet Ray Sets Bed Afire—Firemen in Suffern, N. Y., were called out to fight a fire started by a violet ray outfit that was being used, and which set fire to the bedclothes.

Mamaroneck, N. Y., Votes on Pumper—An election was held in Mamaroneck, N. Y., to consider the purchase of a 1,000-gallon pumper.

Pleasant View, Pa., Planning for Station—Plans will be drawn soon for a new fire station to be erected in Pleasant View, Pa.

Greenfield, O., Considers Better Protection—A committee has been appointed in Greenfield, Ohio, to consider means of bettering the fire protection of the community.

Royersford, Pa., Purchases Ladder Truck—One of the fire companies in Royersford, Pa., has purchased a ladder truck for $10,000.

New Mexico Chiefs to Meet in Socorro—The convention of the New Mexico State Fire Chiefs' Association will be held in Socorro, N. M., on July 27-28.

Fire District to be Formed in New Woodstock, N. Y.—A fire district is to be formed in New Woodstock, N. Y. Purchase of fire apparatus is planned.

Bayonne City, N. J., to Have New Houses—Plans have been drawn for two fire stations to be erected in Bayonne City, N. J.

Manchester, N. H., Considering Purchase—City officials of Manchester, N. H., are considering the purchase of a 1,000-gallon pumper for about $12,000.

Mexico, N. Y., May Purchase Apparatus—Mexico, N. Y., is considering the purchase of a pumper equipped with chemical tanks.

Long Beach, N. Y., to Have New Station—Bids have been received for the construction of a new fire station in the West End section of Long Beach, N. Y.

Elmira, N. Y., to Install Traffic Sirens—Elmira, N. Y., will install a number of traffic sirens to warn of the approach of fire apparatus.

Voorheesville, N. Y., Votes on Apparatus—Residents of Voorheesville, N. Y., have voted on the question of buying new fire apparatus.

Scituate, Mass., to Extend Fire Alarm System—Scituate, Mass., has voted to spend $13,000 for extension of the fire alarm system, and $6,000 for new fire apparatus.

Holmen, Wis., Farmers Form Fire Company—Farmers in the vicinity of Holmen, Onalaska and the town of Farmington, Wis., formed a fire company. It is planned to purchase fire apparatus in the immediate future.

Shamokin, Pa., to Have Community Fire Station—A combined fire station and community fire house will be erected by the Ralpho Company in Shamokin, Pa. Foundations for the building are already in place.

Marcus Hook, Pa., Has New Alarm System—A fire alarm system has been installed in Marcus Hook, Pa., that will work simultaneously with the borough's signals. The improvement has been financed by the two fire companies.

Port Washington to Entertain Nassau Firemen—The local committee in Port Washington, N. Y., are planning for the entertainment of the Nassau County Firemen's Tournament to be held on June 20.

Hoy Renominated Chief of Norristown—Chief Peter V. Hoy has been renominated chief of the Norristown, Pa., department. This will be the thirtieth term for which he has been nominated.

Schenectady, N. Y., to Have New Headquarters—Aldermen of Schenectady, N. H., adopted resolutions providing for a new central fire headquarters and for remodeling another building for a truck company. A bond issue of $200,000 will be floated for these improvements.

Conshohocken, Pa., to Have Fire Alarm—The town council of Conshohocken, Pa., has appropriated $2,000 towards the installation of a fire alarm system. Firemen sought this improvement as they said that the antiquated telephone system handicapped them in reaching the blaze in time.

Hartville, S. C., Has Low Fire Loss—In submitting his annual report, Chief H. Leland Law of Hartsville, S. C., stated that the loss last year was the lowest during the past sixteen years. The fire loss was approximately $15,000. The number of alarms received last year was also less than the year previous.

Hudson, N. Y., Must Purchase Apparatus—The New York State Rating Organization has stated that either Hudson, N. Y., must purchase another pumper and make some other improvements in the fire department or the fire insurance rates will be raised.

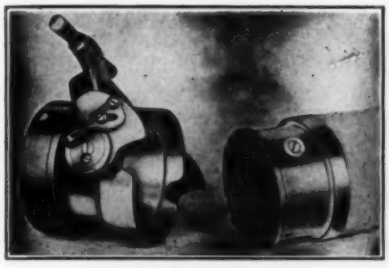
Chief Norton of New York City, Retired—Thomas F. Norton, chief of battalion in New York City and former instructor in the Fire College has been retired after more than twenty years of service. Some time ago he was injured while responding to a fire in Brooklyn and after the accident, he was placed on light duty.

Sues for Church Fire in Fall River, Mass.—As an aftermath of the big Fall River conflagration, the Congregation Beth-El whose temple was destroyed, has entered a suit for $75,000 damages against the Thomas H. Elston Wrecking Company which was in charge of tearing down the Pocasset Mills where the flames originated.

Box 4 Associates Guests of Insurance Patrol—Members of the Box 4 Associates of Worcester, Mass., were guests of the Insurance Fire Patrol on March 23. William H. Guertin, superintendent, and Bert Baker of the patrol were in charge of arrangements. There was a dinner followed by entertainment consisting of acts from several vaudeville theatres.

Box 52 to Visit Gamewell Factory—The Box 52 Association of Boston, Mass., will visit the Gamewell Company factory, Newton Upper Falls. On May 16, Assistant Chief Thos. F. Dougherty of the New York Fire Department is to be the speaker at a meeting to be held in the Copeley-Plaza Hotel in Boston.

SPEEDY SCIENTIFIC!



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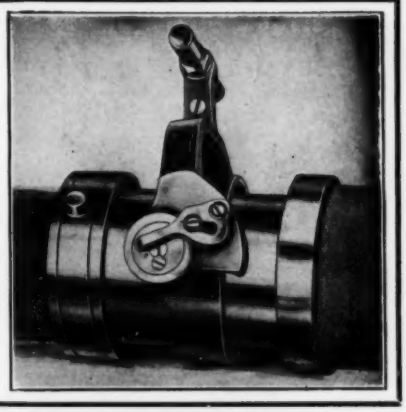

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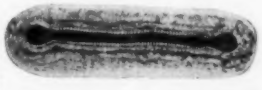

The City of Wheeling just purchased 5,000 feet of Bi-Lateral Fire Hose coupled with rocker lug couplings. This city purchased 5,000 feet last year and it is believed that as soon as their department is equipped with this improved construction in fire hose they will be able to cut their hose expense to less than half of what it has been previously. Let the BI-LATERAL FIRE HOSE COMPANY tell you why this may be true.

Triple Combinations

300-350 and 500 Gallons Capacity

Light and Heavy Hook and Ladder Trucks.
Miscellaneous Fire Fighting Equipment.
Fire Department Ladders.

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Instant Alarm
Every telephone is a fire alarm station, permitting operator to sound alarm instantly, giving your fire department a chance to get the jump on the fire.

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We will give a $35.00 Blanchard Adjustable Angle Nozzle Tip to each of the writers of the four best letters received from March 7th to June 1st, stating the advantages of using these tips at fires. It is understood that all letters received in this contest can be published.

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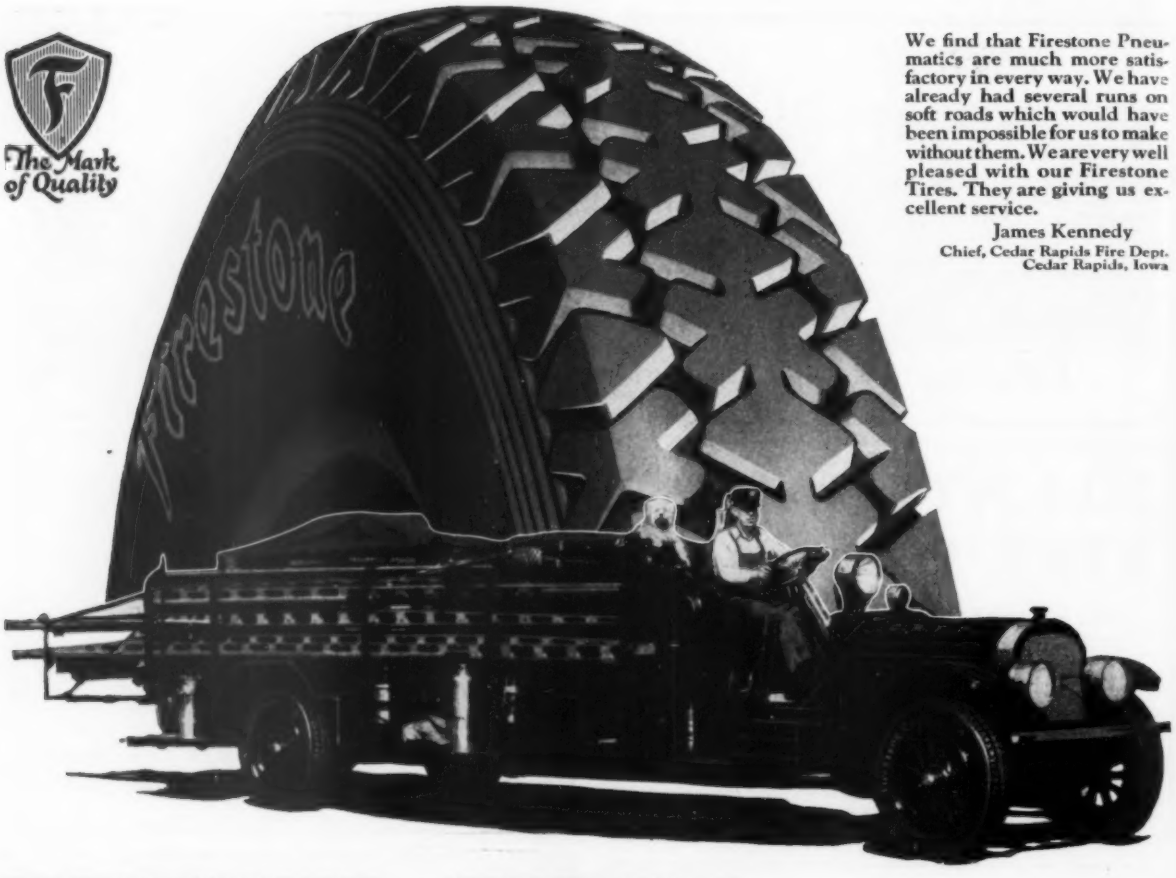

We find that Firestone Pneumatics are much more satisfactory in every way. We have already had several runs on soft roads which would have been impossible for us to make without them. We are very well pleased with our Firestone Tires. They are giving us excellent service.

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Chief, Cedar Rapids Fire Dept.
Cedar Rapids, Iowa

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Backed by Better Service

Firestone Gum-Dipped Tires, with their extra-strong sidewalls and long-wearing, road-gripping non-skid treads, are more and more coming to be the choice of Fire Departments.

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MOST MILES PER DOLLAR

Firestone
GUM-DIPPED TIRES

AMERICANS SHOULD PRODUCE THEIR OWN RUBBER. Harvey S. Firestone

Your Catalog Page

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1 Acid Siphons.
2 Adaptors for Changing Hydrant Threads.
3 Acid Jars and Rings.
4 Aerial Ladders, Detachable.
5 Aerial Trucks.
6 Alarms, Siren, Electric.
7 Alarm Systems, Industrial.
8 Alarm Systems, Municipal Telegraphic.
9 Alarms, Thermostatic.
10 Asbestos, Clothing
11 Badges Insignias, Buttons, etc.
12 Banners, Trumpets, etc.
13 Battery Jars.
14 Battery Zincs for Fire Alarm Batteries.
15 Bells, Fire Alarm, Municipal.
16 Body Equipments.
17 Boxes, Gongs, Reels, Registers, Fire Alarm.
18 Brakes, Air.
19 Brake Linings.
20 Brooms, Fire.
21 Building Materials, Fire Retardant.
22 Caps, Firemen's.
23 Chains, Non-Skid, Fire Apparatus.
24 Chassis for Fire Apparatus.
25 Chemical Engines and Tanks.
26 Chimney Cleaning Compounds.
27 City Service Trucks.
28 Coats & Suits, Firemen's Quick Hitch.
29 Combination Chemical & Hose Cars.
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44 Fire Escapes, Rigid.
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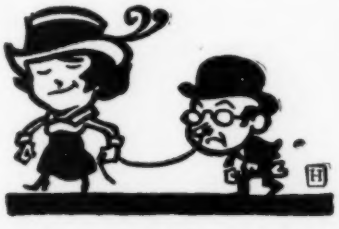
49 Gas Masks and Respirators.
50 Gas & Smoke Helmets.
51 Gasoline & Oil Handling Equipment.
52 Goggles, Firemen's.
53 Helmets, Metal, etc.
54 Hose Carts, Reels & Racks.



Help Wanted?

This page is here to make it *convenient* for you to get complete specifications and prices from *reliable* manufacturers of equipment needed for your department. It is *your* page to use freely without any obligation.

To get the information you want, just mail in the coupon below with your name and address and numbers that indicate the equipment listed below on which you would like descriptive literature.

We will then notify reliable manufacturers of your interest in such equipment and request that they send you complete information. They will gladly do this and it will be a pleasure for us to help you in this way. No charge whatever! So go to it. Help wanted!

For Information on Any Equipment Not Listed, Write on This Page or Use Separate Sheet.

55 Hose Clamps.
56 Hose Fire.
57 Hose, Chemical.
58 Hose Holders.
59 Hose Jackets.
60 Hose Standardization Tools.
61 Hydrant Draining Pumps.
62 Hydrants, Fire.
63 Jacks for Fire Trucks.
64 Jacks, Shoring & Prying.
65 Ladders, Fire.
66 Lightning Arresters.
67 Motorcycles, Fire Dept. Equipped.
68 Nets, Life.
69 Nozzles, Pipes & Misc. Brass Goods.
70 Packings, Pumps.
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72 Paints, Fire Resisting.
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74 Pumping Cars, Standard.
75 Pumping Cars, Foam.
76 Pumps, Fire Apparatus.
77 Pumps, Fire Service, Stationary.
78 Pumps, Portable, for Fire Protection.
79 Record Books, Fire.
80 Relief Valves.
81 Reviving Apparatus, Oxygen.
82 Rubber Clothing.
83 Searchlights.
84 Shingles, Fire Retardant.
85 Shirts, Firemen's Special.
86 Sirens, Apparatus & Chiefs' Cars.
87 Sliding Poles.
88 Soda & Acid Chemicals.
89 Spark Plugs, Fire Apparatus & Motorcycles.
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92 Sprinkler Supervisory Service.
93 Sprinkler Systems, Automatic, Foam.
94 Sprinkler Systems, Automatic Water.
95 Starters, Fire Apparatus, Automatic, Air.
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98 Tetrachloride Chemicals.
99 Thawing Equipment, Hydrant.
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—worth using.

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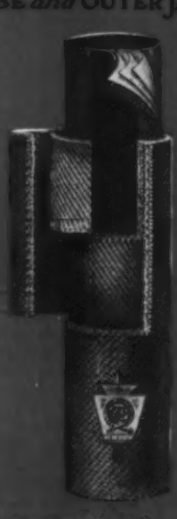
IN TWO PARTS INNER TUBE *and* OUTER JACKET



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—lasts longer than same quality tube cemented to the fabric because it is in complete repose when hose is not in service.

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A Wax and Gum

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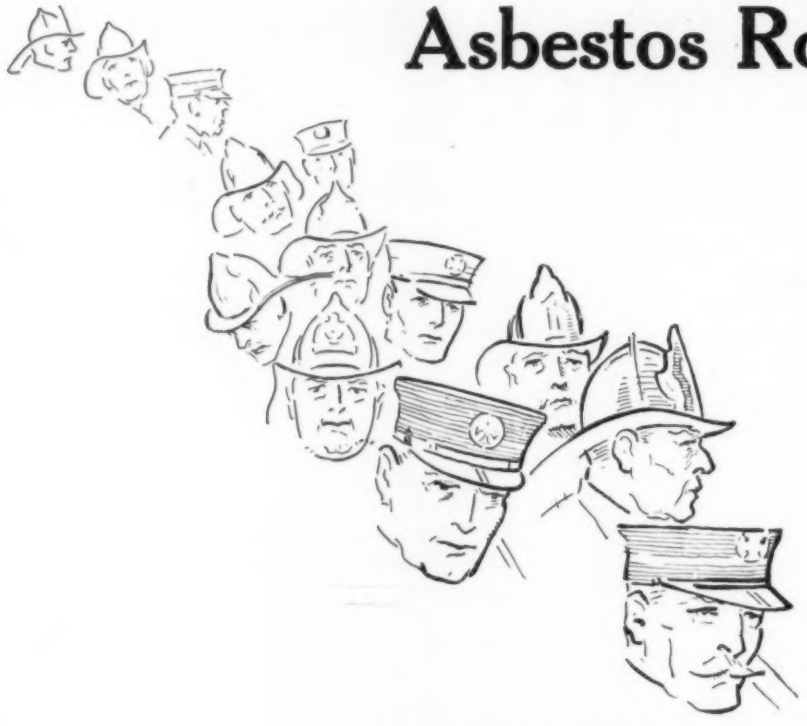

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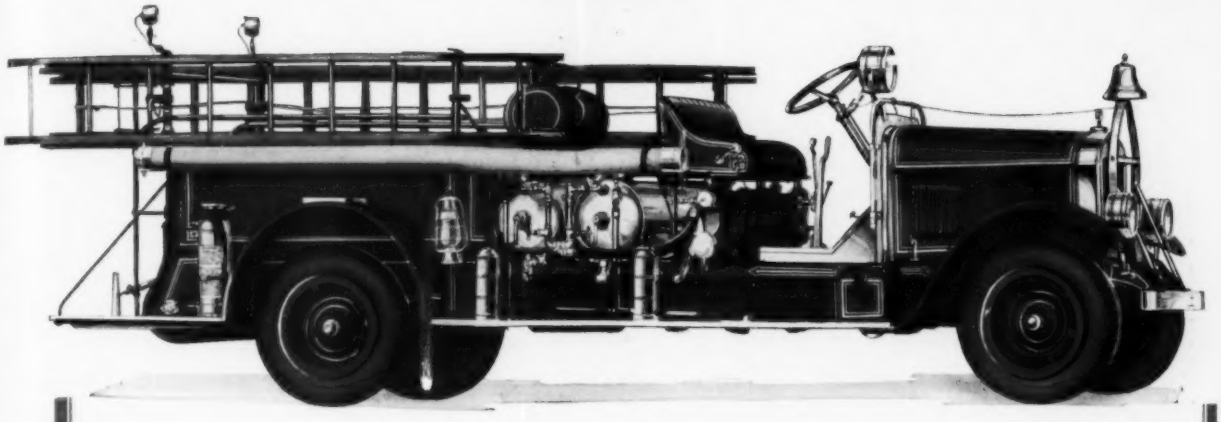

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